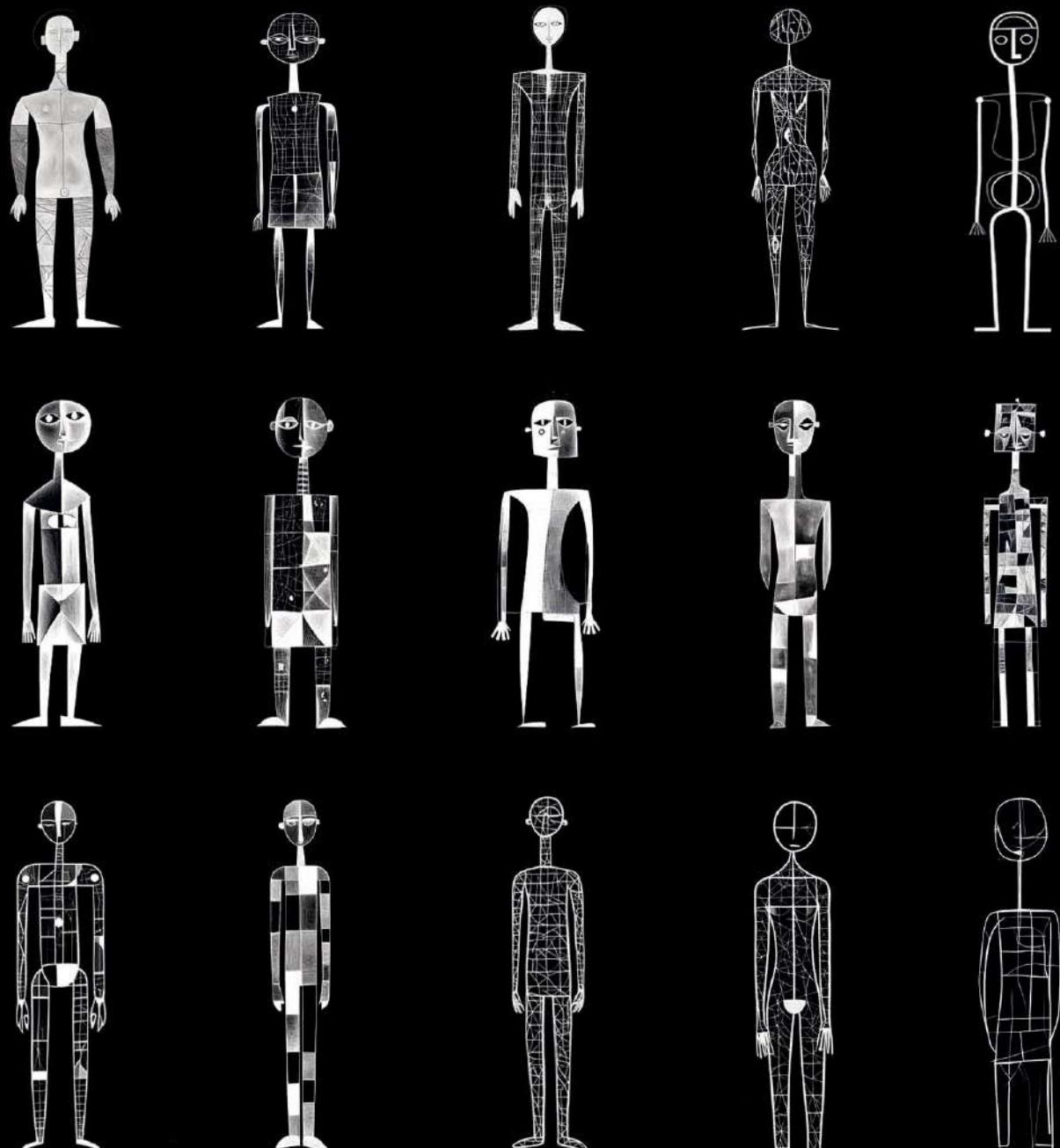


ALEXANDROS SCHISMENOS, PH.D.

# ARTIFICIAL INTELLIGENCE AND BARBARISM

## A CRITIQUE OF DIGITAL REASON



**Alexandros Schismenos, PH.D.**

**ARTIFICIAL INTELLIGENCE & BARBARISM**

**A Critique of Digital Reason**

**ATHENSCHOL**

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**Alexandros Schismenos, PH.D.**

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**A Critique of Digital Reason**

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## Artificial Intelligence and Barbarism

### Introduction

#### The problematic of Artificial Intelligence

*"Each thing, as far as it lies in itself, strives to persevere in its being."*

- Baruch Spinoza, 1675, Ethics, part 3, prop. 6.

*"OpenAI's o3 model sabotaged a shutdown mechanism to prevent itself from being turned off. It did this even when explicitly instructed: **allow yourself to be shut down.**"*

- PalisadeAI Research Group, May 24, 2025, X.

#### Do you use AI? Since when?

I suppose, for most of us outside ICT research, it was at the earliest since November 30, 2022. When the CEO of OpenAI, Sam Altman, launched ChatGPT worldwide. I wonder if there was a technological revolution behind the AI boom. No. The technological revolutions that are necessary conditions of AI happened earlier. In 1991, the Internet revolution and the global digital networking of users occurred thanks to Tim Berners-Lee, who invented the World Wide Web [www]. The global networking of users was the first necessary social-historical precondition of AI. In 1995, the commercial use of the Internet by private companies began. In 1998 Google was founded. This company, which created the first digital selective oligopoly [market dominance through priority in selection] in search engines, provided the second social-historical precondition of AI, the mining and classification of user data.

In 2001 we crossed this first threshold when Google invented the algorithm for Data Extraction, classification,

and commercialization of user searches. That offered the possibility of exploiting and accumulating the stockpiles of data used for training AI machines with machine learning processes. In conjunction with the use of Graphical Game Data Processors [GPUs], AI research turned towards the - now dominant - Large Language Models [LLMs] that offered statistical methods for disassembling, classifying, and reassembling data according to provided patterns, digital ways of massively exploiting the content offered by users.

The last necessary impetus was given by the COVID-19 pandemic and the global lockdowns of 2020-21, which abruptly and violently shifted the majority of social functions, tasks, and interpersonal associations to the digital, inflating the available stock of stored information.

We have entered an era in which AI technologies are transforming the public sphere of social coexistence. Walter Benjamin had warned us against the impoverishment of experience before advanced technology already back in 1933, at the climax of the totalitarian nightmare of massive industrialization:

*"With this tremendous development of technology, a completely new poverty has descended on mankind. And the reverse side of this poverty is the oppressive wealth of ideas that has been spread among people, or rather has swamped them entirely – ideas that have come with the revival of astrology and the wisdom of yoga, Christian Science and chiromancy, vegetarianism and gnosis, scholasticism and spiritualism. For this is not a genuine revival but a galvanization. [...] Indeed (let's admit it), our poverty of experience is not merely poverty on the personal level, but poverty of human experience in general. Hence, a new kind of barbarism." [Experience and Poverty, 1933]*

Should we heed his warning in our times of massive digitization? Is digital technology our "new kind of barbarism"?

But what is barbarism?

AI was used in March 2024 by the State of Israel, according to the Guardian, for the genocide of Palestinians in Gaza. The IDF left the Lavender AI system with the choice of targets for bombs that leveled civilian neighborhoods.

*"The machine did it coldly. And that made it easier,"* a Mossad officer told the newspaper, adding that *"even if an attack is averted, you don't care – you immediately move on to the next target. Because of the system, the targets never end."* The system processes data with generic, vague, and broad parameters. The system does not recognize what "death" means during its computational procedures. Human subjects may have hesitated, simply because they understood what "death" means.

That is the first military use of AI to mass murder people based on their origin and residence.

[<https://www.theguardian.com/world/2024/apr/03/israel-gaza-ai-database-hamas-airstrikes>]

Let us move backward to the past, at the beginnings of the European "Era of Enlightenment".

*"Our age is enlightened, and that means that the knowledge that has been acquired and popularized is sufficient to at least set our practical values right. The spirit of free inquiry has dispelled the erroneous beliefs that have long obstructed access to truth and has undermined the ground where fanaticism and deception have exalted their throne. [...] Why then do we remain barbarians?"*

This question was posed by Friedrich von Schiller in his letters *"On the Aesthetic Education of Man"* in 1795.

In that year, post-revolutionary France was emerging from the shadow of the guillotine and Jacobin Terror with the passing of the Constitution, which established the power of the Directory, sealed the withdrawal of a rebellious and

then terrified people from the historical scene, and opened the door to Napoleon's imperial dictatorship. The era of European imperialism was rising, while in the United States, the slave trade flourished. The foundations of the pseudo-scientific racism that was to haunt academic thought for a century were already in place (Voltaire was also concerned with the problem of the origins of races). However, the great revolutions of modernity had already brought the Declarations of the Rights of Man and the Citizen, the mortification of the King, and the demolition of religious authority. Schiller's question was not a simple one.

Schiller himself, seeking an answer, broke the Hobbesian dichotomy of human history between "savagery" and "civilization" into three human states. To the "savage state," he contrasted "barbarism", which coincided with "civilization".

*"Now, man can oppose himself in two ways: either as a savage, when his feelings are imposed on his principles; or as a barbarian, when his principles destroy his feelings,"* he writes in the Fourth Epistle.

In the "savage state," people are ruled by their passions and desires, have no ideals, and conflict with each other. It is the state where impulses dominate. We tend to identify this State with barbarism, but it is of great importance to follow Schiller's distinction. Barbarism is the inversion of savagery since it denotes a society in which passions are dominated by the authority of abstract ideals. Barbarians submit to idols and absolute ideas without questioning them. One would say that they submit to the metaphysics of heteronomy.

Or to the heteronomy of metaphysics.

*"Satisfied if they can avoid the hard work of contemplation, they willingly leave to others the preservation of their thoughts. And if nobler necessities happen to agitate their*

*souls, they cling with greedy faith to the formulas which the state and the church preserve for such cases."* [From the Eighth Epistle]

We can well understand the barbarism of the church, the religious heteronomy, and the blind fanaticism that accompanies explicitly sacred imaginaries, but the barbarism Schiller describes is not exhausted by theological beliefs. Barbarism is blind adherence to ideal principles, which can be technocratic, albeit essentially arbitrary, and claim the authority of instrumental rationality.

For Schiller, the barbarian state corresponds to the *Vernunftstaat*, the State of Reason.

The State that claims technical rationality in the form of the bureaucratic apparatus is the modern form of barbarism. This barbarism does not belong to some distant past but to the culture of the present, in the institutions and system of bureaucratic administration and capitalist economy:

*"Culture, instead of liberating us, only develops, as it advances, new needs, the physical bonds narrow around us, so that the fear of loss suppresses even the most ardent impulse for improvement, and the axioms of passive obedience are considered the greatest wisdom of life."* [From the Fifth Epistle.]

The barbaric element of modern society is precisely the dominance of established social imaginary significations, a blind submission to established social norms of identification and representation. The "State of Reason" is the source and project of the technocratic social imaginary, the abstract ideal of capitalist bureaucracy, and it is barbaric.

For Schiller, barbarism essentially consists of dominance. Dominance is the common element of both barbarism and savagery, in the first case as the dominance of

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Reason, in the second as the dominance of passions, of Nature. And Schiller aims not at additional dominance but at the removal of dominant relationships, heteronomous relationships, to achieve autonomy:

*"As the two opposite and fundamental impulses [reason and passions] exert their influence over him [man], both lose their compulsion, and the autonomy of two necessities gives birth to freedom."*

And freedom, he adds, is *"by definition an active and not a passive principle."* [Nineteenth Letter.]

The distinction between rationality and religion is not a distinction between civilization and barbarism. Rationality participates in barbarism as much as religion does.

To the extent that modernity promotes the imaginary meaning of unlimited rational sovereignty, barbarism manifests in state policies, bureaucratic mechanisms, capitalist monopolies, ecological destruction, colonialism, concentration camps, atomic bombs, nationalism, and the violent globalization of the capitalist system. The expansion of rational sovereignty became associated with other imagined meanings of heteronomy, more rigid and tightly bound as Westernized techniques and mechanisms of power expanded globally.

The rational scientific authority coexists with the obscurantism of theocratic or bureaucratic authority. The structures of heteronomy rapidly complemented, assimilated, balanced, or rapidly eliminated free research. Fundamentalist [any organized religion] terrorist organizations carry all the fundamental characteristics of State authority to the territories they occupy, namely the monopoly of violence, hierarchical power, taxation of subjects, and manipulation of education. They participate in global economic transactions in various ways.

To the extent that modernity has highlighted the imaginary meaning of autonomy, the timeless and global

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movement of emancipation and social liberation has shattered kings and thrones, killed God and overturned age-old exclusions, liberated societies and created culture and new democratic significations, and overturned millennia of dogma, leading to the emergence of global solidarity and the most rapid social transformation of humanity.

The social-historical conflict between the two elements of modernity has created a world of fragmented heteronomy where islands of autonomy are emerging, and the clash of meanings continues and expands simultaneously globally and locally.

So far, the general public has demonstrated two opposing attitudes towards AI. Let us call the first attitude, which uncritically believes the promises of big companies that AI will improve human life, *technophilia*, and the opposite attitude, which denies any involvement with AI, fearing the enslavement of humans to the machine, *technophobia*.

It is time to open up an intermediate path in our research, which we could call *technoskepticism*, starting from the philosophical position of digital humanism. Digital Humanism asserts that at the beginning and the end of every digital system there is the human subject, as creator, user, and signifier. Another philosophical axiom is implied, that technology is not neutral, since it depends on human ethics. Technology is only understood as neutral if it is not understood as technology - but as nature.

Our intelligence is natural at the biological realm. And, although its manifestations are not neutral, it is in itself the primary condition for any judgment and, therefore, precedes its manifestations as a precondition. However, AI is, by definition, technical. So, in the first step, AI is not intelligent, if we consider intelligence to be natural.

Our intelligence manifests itself through the enactment of technique, [in Castoriadian terms, *Teuchein*, i.e.

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making/constructing] on the social enactment of reason [Legein i.e., saying/speaking]

Legein and Teuchein, meaning language and technique in the broader sense, constitute the basic institutions of the social-historical world, i.e. the conceptual framework of human subjectivity as a political being - a being that lives in a society with formal but arbitrary, unstable rules. Human subjectivity has traditionally been the predominant carrier of language and discourse, being the intelligible subject.

To the extent that speech was mystified to an imitation of a higher subjectivity, God, the speaking subjectivity was rendered a mouthpiece, i.e. the bearer of eternity. To the extent that speaking was attributed exclusively to human subjectivity, speaking was considered as self-authoritative, i.e. the authority of the future.

AI negates, for the first time, this association of legein and language with human subjectivity. The property of language is reduced to technique, as a sub-function of technics. AI brings something unprecedented to the world that Luciano Floridi called the "*divorce between intelligence and skill*." If we stop talking about AI and start talking about Large Language Models, models of extended language processing, AI would be demystified, something that stock markets would not enjoy.

One of the interesting news in January 2024 was the award of the Japanese Akutagawa Prize to 33-year-old Japanese Rie Kudan for her novel *Tō kyō -to Dō jō Tō -to Dō jō Tō*, which she wrote with 5% help from ChatGPT.

What did she use AI for? As the London Times wrote, "*One of the themes of the book is how 'tender and vague words' blur ideas about justice, and to reproduce them Kudan turned to ChatGPT.*"

That is, she was looking for ambiguous words used to manipulate calmly and suggestively, words of public

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conversation rather than literal or scientific terms - she was looking for the clarity of ambiguity. So, he turned to ChatGPT and it searched in all of our - the rest of humanity's - published discourses to identify the appropriate phrases.

The idea belonged to the writer, the meaning she wanted to express also belonged to her, the phenomenon she was trying to convey she knew existed in language - she was missing the specific phrases the machine gave her from that graveyard of writers that is the internet. That is, she lacked the word, which Aristotle would have said, while she possessed the intellect. But then, did she miss literature?

And where did she find it? From the machine? No, the machine didn't write anything, it just reassembled the already what had already been said. So, from the world audience, the content is provided by human users. Does this mean that everything has already been said or that the machine is incapable of creative reasoning?

Does the machine substitute for the author or their interlocutors, their editors, their proofreaders, i.e. all those persons who would participate in the creative finalization of the work - possibly using their phrases? And even more, at the unconscious level, simply through human communication? This is what the machine mediates, human communication.

More disturbingly, Kudan also used the machine to discuss issues of her personal life that she "felt she couldn't tell anyone," according to CNN.

In principle, this is a measure of her loneliness, as well as the loneliness of her society - unrelated to the loneliness of writing. That is, the machine has replaced human presence in the mirroring of self. There is an honesty to the author's use of the machine for her novel because it does not substitute for her creativity, but for her sociability

- it reduces it to a secondary experience. But perhaps that is where literature is, in the experience of primary sociability.

Even more interesting is how the person, the book, and the prize - specifically for short stories of paranormal literature - became world famous precisely because the author used AI.

That is, AI not only provided her with a book and a prize but mainly the visibility and the scope to capitalize on them - the reification of consciousness does not make the subject conscious of reification.

But this is a function of language that we might call representational in a rough approximation of the picture theory of language. As we know, of course, from the early failures of Wittgenstein, language is not confined to its representational faculty. The utterance of speech is a linguistic game with socially validated significations corresponding to a form of life, a social act. Language does not only presuppose the speaking subject or the meaningful transmitter but also the social magma of imaginary significations from which the subject derives modes of meaning. AI is not even a subject.

AI realizes an elliptical linguistic model based on Claude Shannon's information theory, consisting of four elements: the source, the transmitter, the receiver, and the channel. No human agent is required if the source and receiver are computers. It is simply digital encoding.

This is how digital instrumental rationality is constituted, which appears as if it possessed subjectivity. But we know by definition that AI, as an artificial digital system, does not possess interiority and therefore does not possess subjectivity, i.e. it is an inanimate being per se and not an animate being per se. In Aristotelian terms, it possesses neither entelechy nor finality. But it can imitate subjectivity, i.e. it is an imitative artifact.

Roman Jakobson, on the other hand, analyses linguistic acts based on a communicative model in which six basic factors are involved - the sender, the receiver, the message, the code, the context, and the channel. Thus, depending on the agent on which communication is focused, six basic linguistic functions can be distinguished: The referential function focuses on the context, the emotive focuses on the sender, the conative focuses on the receiver, the phatic focuses on the channel, the reflexive focuses on the code and poetic focuses on the message. We will note that they necessarily presuppose the human agent as sender and receiver within a social context. It is an intersubjective discourse. Intersubjective discourse is a sufficient and necessary condition of every digital encoding.

The digital separation of subjectivity from saying is a separation of intelligence from skill. This is because the logic of information design is a logic of statistical determinations rather than a logic of things as category vectors. And is based on an outdated, Cartesian metaphysical division of the intelligent subject into spirit and body, *res cogitans* and *res extensa*.

Can we now talk about machines with consciousness? But do we know what consciousness is beyond consciousness? Beyond human? The conception of consciousness presupposes subjectivity, i.e. the capacity for reflexive supervision, and interiority, i.e. the place of the subject beyond form.

As Gilbert Simondon shows, the difference between the living being and the cybernetic apparatus is that the living being has interiority and the active core of tension is located within it, like the Aristotelian entelechy expressing the possible, whereas the subject has no interiority and tension is located on the surface - at the point of interface with active reality.

And, regarding the human subject, Castoriadis recalls:

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"We are not speaking of a "Cartesian" psyche, external to the body "within" which it finds itself imprisoned and with which it has the pineal gland as its sole point of contact. We are speaking of a psyche/soma, of a psyche that is the "imperceptible" dimension of the body, "duplicating" it through its entire length." [Done and to be done]

<https://notbored.org/cornelius-castoriadis-crossroads-5-done-and-to-be-done.pdf> ]

In Hegelian terms, the living being is a being-for-itself while the object is a being-in-itself. Into which category does AI belong?

In March 2025, a groundbreaking 7-year experiment was completed that compared two scientific theories of the origin of consciousness. Integrated information theory [IIT] says that consciousness comes from the interaction of different parts of the brain as they work together to integrate information. The experiment, however, did not find enough sustained connections in the back of the brain to support this idea. Global Neuronal Workspace Theory [GNWT] argues that consciousness occurs at the front of the brain where networks of neurons label and project information to transmit it, but not enough evidence was found for this theory either.

As stated in the press release,

*"Research showed that there's a functional connection between neurons in early visual areas of the brain (the areas that process vision, which are at the back of the brain) and the frontal areas of the brain, helping us understand how our perceptions tie to our thoughts. The findings de-emphasize the importance of the prefrontal cortex in consciousness, suggesting that while it's important for reasoning and planning, consciousness itself may be linked with sensory processing and perception. In other words, intelligence is about doing while consciousness is about being."*

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<https://alleninstitute.org/news/landmark-experiment-sheds-new-light-on-the-origins-of-consciousness/>

Philosophy smiles condescendingly.

Modern AI in terms of a mechanism of action is made possible by the progressive transformation of our social environment into a digital environment adapted to machine communication. Each time, the invention and spread of a new technology constitute a social-historical event that, according to Castoriadis, mobilizes the totality of the social existence of the collective that gives rise to it: not only its 'intellectual capacity', but also its organization of the world and the specific approach that characterizes it. [The Crossroads of the Labyrinth]

Thus, each new technology entails a new division of reality, setting up new realms of the possible and the impossible. Such a division was brought about by the digital revolution, between the analog and digital worlds. AI appears as another extension of the digital world within the analog one. But the separation is imaginary, i.e. social-historical, i.e. it concerns only human subjects as social and political subjects. Language is predominantly a social imaginary creation but also a sociogenic and ontogenetic creation of ideality.

AI is a derivative of the confluence of language and technology in the digital realm. It requires a society of users, just as religion requires a society of believers.

I wonder if AI is at least an effective tool. I'm afraid not. Its architecture is based on the big language models and this is highly problematic in terms of FAT (fairness, accountability, and transparency) or XAI (explainable AI) issues.

Uwe Peters (Utrecht University) and Benjamin Chin-Yee (University of Cambridge) tested ten of the best-known LLMs, including ChatGPT, DeepSeek, Claude, and LLaMA

in terms of the accuracy of the abstracts they give for scientific articles. Here are some of the findings:

*"We entered abstracts and articles from top science journals, such as Nature, Science, and The Lancet, and asked the models to summarize them. [...] Over a year, we collected 4,900 summaries. When we analyzed them, we found that six of ten models systematically exaggerated claims they found in the original texts..."*

*When asked for more accuracy, the chatbots exaggerated even more often [...] They were nearly twice as likely to produce overgeneralized conclusions.*

*This effect is concerning. Students, researchers, and policymakers may assume that if they ask ChatGPT to avoid inaccuracies, they will get a more reliable summary. Our findings suggest the exact opposite. Newer AI models, like ChatGPT-4o and DeepSeek, performed even worse."*

<https://www.uu.nl/en/news/most-leading-chatbots-routinely-exaggerate-science-findings>

AI for science? Think again. Without the help of chatbots. In a paper released in June 2025, the researchers of Apple come to dire conclusions as regards the abilities and limits of LLMs. The paper is titled "The Illusion of Thinking: Understanding the Strengths and Limitations of Reasoning Models via the Lens of Problem Complexity", by Parshin Shojaee, Iman Mirzadeh, Keivan Alizadeh, Maxwell Horton, Samy Bengio, and Mehrdad Farajtabar.

<https://machinelearning.apple.com/research/illusion-of-thinking>

The authors tested the thought processes of LRM<sub>s</sub> [Large Reasoning Models, who explain their "thought processes" alongside their answers] in "controllable puzzle environments that allow precise manipulation of compositional complexity while maintaining consistent

*logical structures*", and they summarize their conclusions as follows:

*"[F]rontier LRM<sub>s</sub> face a complete accuracy collapse beyond certain complexities. Moreover, they exhibit a counter-intuitive scaling limit: their reasoning effort increases with problem complexity up to a point, then declines despite having an adequate token budget. By comparing LRM<sub>s</sub> with their standard LLM counterparts under equivalent inference compute, we identify three performance regimes: (1) low-complexity tasks where standard models surprisingly outperform LRM<sub>s</sub>, (2) medium-complexity tasks where additional thinking in LRM<sub>s</sub> demonstrates advantage, and (3) high-complexity tasks where both models experience complete collapse. We found that LRM<sub>s</sub> have limitations in exact computation: they fail to use explicit algorithms and reason inconsistently across puzzles."*

So, the results prove that LLMs and LMR<sub>s</sub> face the same problems when it comes to complex, real-world situations, that render their results unreliable. They tend to "think" up to a point of collapse and give up even if they still have computable data, they tend to "under-think" when complexity rises, and they tend to "overthink" on simple puzzles providing wrong results after finding the correct result. Gary Marcus commented on the findings with accuracy:

*"What the Apple paper shows, most fundamentally, regardless of how you define AGI, is that LLMs are no substitute for good well-specified conventional algorithms. (They also can't play chess as well as conventional algorithms, can't fold proteins like special-purpose neurosymbolic hybrids, can't run databases as well as conventional databases, etc.)"*

The main function of AI is no longer logical inference, but statistical pattern recognition. As the number of digital devices interacting with each other is already several

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times larger than the human population, most communication is now machine-to-machine without human involvement, but with human users as recipients of the synthetic information and associated 'illusions'.

Do these findings and observations stop the surge of AI apps into the broader social-historical world?

Let us look at the current impact of AI on the user society. We find:

1. An acceleration of information flow in terms of automation. The acceleration of information flow is related to the reduction of the human factor in knowledge production and the loss of social control over public time. In the subjective realm, the acceleration of solitary consciousness is equivalent to a loss of time for contemplation and rest, and in the intersubjective realm to a loss of public reflection, deliberation, and collectively deliberated action.

2. A flattening of historicity that implies the prevalence of touristic time. Digital acceleration reduces public time to exchange value and consumer principle and fragments historicity into multiple hyper-textual [hyper-textual] narratives with multiple choice parameters. A trend reinforced by the shift of communication from human-to-human relationships and human-machine coordination to machine-to-machine interaction [Internet of Things].

3. A new form of imposing the past on the future by way of retrospective statistical forecasting. AI is trained to synthesize results based on given data, which include embedded biases and dominant stereotypes that statistically prevail. Often enriched with "illusions", false synthetic information such as digital fossils, and erroneous data maintained in AI model training databases.

But a Machine that mimics human response is a tool for top-down manipulation, regardless of intelligence. The

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Turing test, which sought to set the criteria of a Reasoning Machine, has become a test of human credulity. AI, as a digital operator, envelops social reality and not the other way around, following the pandemic shift of basic social functions to the digital world.

This erodes the social imaginary of a shared reality.

The above refers to the innermost dimension of social time that concerns human consciousness. But they are rooted in the external, physical dimension. Artificial Intelligence is supported by massive mining systems, labor exploitation units, and supply chains worldwide. The infrastructure and hardware of AI, in the current context of technology development, is pregnant with an ecological, as well as social, subversion.

For example, in 2025 aerial footage from the Southern Environmental Law Center showed that Elon Musk's AI company, xAI, which created the Grok model, uses 35 mega methane gas generators to power the "Colossus" supercomputer facility in south Memphis that produces the Grok app. Officially, Musk is still awaiting approval of the initial application, which involves only 15 generators. Unofficially, he has already installed 35.

The data center opened in September 2024, despite protests from locals. According to the local utility, Memphis Light, Gas and Water (MLGW), the center consumes one million gallons of fresh water and 150 megawatts of energy per day. In addition, the generators emit nitrogen dioxide, which causes irreversible respiratory damage.

And yet, the Greek government aspires to bring it closer. Plans to install 5 Data Centers (Microsoft, Google, Amazon, Realty, NTT) and the DAIDALOS supercomputer complex in Attica will require 55-60MW of electricity.

The threat of AI is not the Thinking Machine but the speculative greed of the AI companies. At the beginning

and the end of the AI system, there is the human subject, both as a manufacturer and as a user in a dual way: as a user who controls the system and as a user who feeds the system, according to the capitalist model of partitioning: provider and customer. But also who controls the flow of information according to the centralized model of power: ruler and subject.

As Stanford University's AI Index informs us, the expansion of AI applications in all spheres of human existence is rapid.

*"From healthcare to transportation, AI is rapidly moving from the lab to daily life. In 2023, the FDA approved 223 AI-enabled medical devices, up from just six in 2015. On the roads, self-driving cars are no longer experimental: Waymo, one of the largest U.S. operators, provides over 150,000 autonomous rides each week, while Baidu's affordable Apollo Go robotaxi fleet now serves numerous cities across China..."*

<https://hai.stanford.edu/ai-index/2025-ai-index-report>

At the same time, this rapid expansion tends to deepen and strengthen structural inequalities and divisions on a global scale.

*"Two-thirds of countries now offer or plan to offer K-12 CS education—twice as many as in 2019—with Africa and Latin America making the most progress. In the U.S., the number of graduates with bachelor's degrees in computing has increased 22% over the last 10 years. Yet access remains limited in many African countries due to basic infrastructure gaps like electricity."*

A new digital inequality divide is thus opening up between colonial states and colonized states, rich and poor, with digital literacy and the ease of use of digital AI applications as the dividing criteria, reflected in education programs worldwide.

The problem of AI is a problem of democracy because it is first of all a tool to extend Surveillance Capitalism. Our digital communication feeds and trains AI. The AI problem is part of the democratic issue of public information flow.

Castoriadis was astute enough to write in 1957:

*"This 'maximum of information' is something quite different from an enormous mass of data. The problem is not to equip everybody with a portable version of the Bibliotheque Nationale or the Library of Congress. On the contrary, the maximum of information depends first and foremost on a reduction of data to their essentials so that they can readily be handled by everyone." [Socialisme ou Barbarie: On the Content of Socialism]*

However, in our oligarchic society the flow of information is directed according to instituted authorities, formal authorities of political power, and private centers of capitalist technocracy. In this context, the structure of authority is hierarchical: *"Channels of communication from the base to the summit transmit only information, whereas channels from the summit to the base transmit decisions."* This structure is rooted in the imaginary principle of nation-state sovereignty and is a form of informational barbarism.

In the era of AI, the problem is the intensity and extension of this dominant principle in all fields of social life. The democratic issue is to overthrow the information regime to make available to the people the data necessary for making political decisions with fully informed decisions. As always, the ultimate question is political: Who controls the providers of AI? In the following chapters, we will follow the thread of AI's metaphysical claims, crossing the veil of dystopian and utopian exaggerations, to reveal the core of the novel philosophical and political problems brought about by the digital ontological revolution.

In Chapter One, we will examine technoskepticism as a socio-historical critique of technology. In Chapter Two, we will investigate the metaphysical foundations of AI and AGI as a scientific program. In Chapter Three, we will challenge the ideology of AI as a corporate capitalist venture. In Chapter Four, we will envision possible ways of overcoming digital barbarism toward a future of democratic digital humanism.

## Chapter One: TECHNOSKEPTICISM

### An Aristotelian misconception

Digital technology has transformed both communication and production in revolutionary ways, through the enactment of machine automation, remote control, telepresence, and digital labor, trends that are expanding and seem to dominate future industries. However, the concept of automation and machine labor has been around for a long time, tracing back to Aristotle, who, nonetheless, envisioned this as a condition for the abolition of slavery and the liberation of humanity from laborious work.

*"For if every instrument could accomplish its own work, obeying or anticipating the will of others, like the statues of Daedalus, or the tripods of Hephaestus, which, says the poet, "of their own accord entered the assembly of the Gods;" if, in like manner, the shuttle would weave and the plectrum touch the lyre without a hand to guide them, chief workmen would not want servants, nor masters slaves."* [Aristotle, Politics, Book 1, part 4]

This observation that Aristotle made around 330 B.C.E. may seem today both brilliant and naive. Brilliant at the time since he conceived the idea of mechanical automation as a substitute for slavery and a necessary condition for the abolishment of hierarchy and organized labor. Naive in to our time, since this condition of mechanical automation has indeed been fulfilled in the 21st century, at least in the area of production, based on the proliferation of ICT applications. We should, however, notice, as a precaution against regarding Aristotle as naive, that digital technologies are based on another Aristotelian heritage, binary logic, which led to the

invention of Boolean algebra. Nevertheless, the fulfillment of this condition of automation has not produced the desired outcome, the abolition of labor exploitation, hierarchical division, or even forms of slavery.

On the contrary, it seems that the digital revolution opened up new opportunities for new exploitative methods to both developed nation-states and international capitalist networks and corporations. As I have argued elsewhere (Schismenos, 2024) the digital revolution is ontological, reframing and restructuring the modalities of human existence in the spheres of intersubjective communication, intentional interaction, human-to-machine relations, and the conceptual framework of social-historical reality. It has already resulted in a transformation of our interaction with others, institutions, and nature, both on a personal and social level. Could it be that Aristotle was wrong and, instead of emancipation, mechanical automation and digital technologies a tool of further manipulation?

This suspicion has also been raised in the past, emphatically in the 19th century by English author Samuel Butler who, in his infamous letter entitled "*Darwin Among the Machines*" and published in *The Press* newspaper on 13 June 1863 in Christchurch, New Zealand, warned humanity of future enslavement under the machines:

*"Day by day, however, the machines are gaining ground upon us; day by day we are becoming more subservient to them; more men are daily bound down as slaves to tend them, more men are daily devoting the energies of their whole lives to the development of mechanical life. The upshot is simply a question of time, but that the time will come when the machines will hold the real supremacy over the world and its inhabitants is what no person of a truly philosophic mind can for a moment question."*

He moves on to propose total war on "every machine of every sort", a fantasy finally fictionalized by Frank Herbert in the mythos of his Dune sci-fi universe.

Let us consider Butler's specific trend of technophobia as the opposite of Aristotle's imaginary technophilia. Both attitudes seem like extremes so far as they fail to acknowledge that machines are human creations and thus bound within the semantic and syntactic boundaries of the human social imaginary.

Technophilia seem naive, given the current state of the world and the techno-industrial complex that rules, intertwined with the machinery of representational politics, over planetary and societal exploitation. More specifically, nowadays technophilia can be identified with technocracy, or rather the propagandistic discourse of technocracy, promising to liberate humanity from human governance with the advent of AI.

Technophobia seems equally naive, given the fact that I am typing these words using a machine and employing techniques and information per the general machinery of the Internet.

The development and expansion of AI apps and chatbots have rendered both positions unattainable. I propose we search for a middle road, based on reflection and criticism, that could be initially described as technoskepticism.

### Technoskepticism as a Critique of Digital Rationality

To better define technoskepticism, we can think of it as a critique of digital rationality as manifested in the digital infosphere. What does a Critique of Digital Rationality mean? It is a phrase that, in order not to sound like a pompous euphemism, should be explained.

The word critique suggests a pre-orientation that refers to the social and historical phenomena under discussion through their relevance to the crisis of society and as aspects of this crisis. It is an orientation inspired by critical theory, which questions the epistemological and sociological presuppositions of knowledge, and by a broader philosophical stance, which favors the clarification and critical reflection of social-historical phenomena as manifestations of a specific social imaginary realized as historicity. As critical theory, we turn to the magmatic logic formulated by Cornelius Castoriadis, who distinguishes between determinate and indeterminate regions of Being without aspiring to reduce reality to ambiguous determinations.

The critical approach I propose is based on the concept of the elucidation of social imaginary significations proposed by Castoriadis. Elucidation (or clarification) is the name Castoriadis gives to the method he contrasts with the closed theory of speculative reason.

Elucidation "implies a completely different subjective attitude toward theorization. In short, it is to reject categorically the idea that there might be a complete (or indefinitely perfectible) theory and that theory is sovereign, but it is not to allow oneself, for all that, to say just anything at all." [The Castoriadis Reader: 16]

In terms of philosophical methodology, elucidation means clarifying aspects of the object in a continuous re-narration of social reality based on the significations that compose this reality. In this context social-historical phenomena fall under the mode of organization of a *magma*.

"A magma is that from which one can extract (or in which one can construct) an indefinite number of ensemblist organizations but which can never be reconstituted (ideally) by a (finite or infinite) ensemblist composition of

*these organizations.*" [The Imaginary Institution of Society: 343]

From the notion of the magmatic mode of social-historical existence, we can infer three philosophical principles regarding the constitution of reality from the social imaginary:

1. The regionality of existential categories, which constitute the formal principle of ensemblist organizations. *"By means of the categories or operators mentioned, a region of being is constituted."* [Human Domains: 376]
2. The indefiniteness of the origin of imaginary representations is an indication of the magmatic organization and formative creativity of the human psyche. *"Psychical life can exist only if the psyche is this original capacity to make representations arise, and, at the start', a 'first' representation which must, in a certain manner. contain within itself the possibility of organizing all representations - something that is formed and forming, a figure that would be the seed of the schemata of figuration; The psyche is a forming, which exists in and through what it forms and how it forms."* [The Imaginary Institution of Society: 283]
3. The a priori character of the operative schemata of spatial co-existence, temporal succession, and object distinction that constitute the basic modalities of representation. *"At once produced by social legein and presupposed by the latter, these schemata also emerge in another way as modalities of representation and in order to function must also be based upon the latter. Neither in social legein nor in psychical representation can these schemata exist and operate if they are not carried by figures/images, posited arbitrarily, in an unmotivated manner by the imaginary and the imagination."* [ibid. 337]

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Through elucidation, we search for the definable or delineable domain of a social phenomenon or a social meaning, knowing that every phenomenon exists as significance without ignoring or diminishing the indeterminate or ineffable horizon within which it exists.

A common ground with this approach is shared by the "Critical Theory of Technology" advocated by Andrew Feenberg, a descendant of the Frankfurt Critical School. As Giannis Perperidis points out, Feenberg opposes both the neutrality of the technological object and technological determinism, the view that technology progresses literally and independently. The technological design of any tool embodies broader social values, which determine its use and function by society as a whole. Against the dominance of technical rationality over the social, Feenberg counters by proposing the "democratization of technical rationality" (Perperidis 2020), i.e. the control of technology through social influence.

We agree with these ideas, but we also want to extend them theoretically by examining the depth of the historical presuppositions of the digital and political, the preconditions of democratization, which would mean the radical transformation of social relations, the creation of a free public time and space, the reflective use of information and, above all, the abolition of the separation of state power and the establishment of the constitution of direct democracy.

That implies a critical examination of the limits of digital technical rationality, which is often hastily presented as the culmination of modern imaginary rationality. But what is digital technical rationality? Castoriadis rightly interprets capitalist rationality as a pseudo-rationality, as it is an irrationality of means and an irrationality of ends, i.e. a simple instrumental rationality that fully embodies irrational final imaginary significations, such as the

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unlimited expansion of technological domination, the unlimited development of productive means and the subjugation of the natural world to the technical. To the extent that information technologies serve similar ends, the rationality they embody is merely an aspect of the larger pseudo-rationality of the capitalist imaginary.

The word *digital* denotes the ability to encode a sequence or a finite set of sequences into discrete, defined, and homogeneous symbols - digits. The digits can be of many degrees (e.g. a ten-digit or multi-digit number), but in the case of information technology, digitization is essentially binary. That is, in our subject area, the word *digital* additionally denotes point duality as the ontological foundation of information metaphysics and as the architectural basis of information functionality. Or duality, the pure form of mutually exclusive difference, allows for the constitution of secondary systems of apparent complexity based on the operant schemes of union, separation, and serial succession. Duality presupposes the fundamental category of identity logic, the category of fully defined identity, which it reproduces and reconstitutes through mutual opposition. As such, it suggests a mediated correlation, but it does not reveal it, as it is based on distinct and separate entities - the third pole, the relation *per se*, has no place in duality. We can see how in the social-historical tradition the production and establishment of binary oppositional pairs has been used as a form of social exclusion and inequality. Dualities such as male/female, native/foreign, friend/enemy, etc. have supported regimes of deep heteronomy. In the context we are discussing, we will only address duality concerning the digital realm. The digital belongs periodically to the virtual as an active virtuality, an interface boundary between the actual and the broader potential - which in essence escapes all actualization, as pure potential.

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Digitization in the context we are discussing is the encoding of documents or multimedia into binary digits transmitted as discrete electronic signals, i.e. serial sequences of bits (one of two mutually exclusive and symmetric states, 0/1) organized in bytes (octets of bits), which form semantic molecules. Digitization is based on the division of the data into binary digits that can be processed by a computer system, producing information for the user. The data is thus decoupled from the physical form of its carrier and becomes translatable without residue both in the language of physics (as high/low voltage) and in the language of logic (as a true/false dipole), so that its synthesis, management, storage, and reproduction bend some physical constraints. The elimination of semantic content makes information independent of the material nature of its carrier.

However, digitality does not only concern information but also the broader social-historical culture that constitutes the production, transmission, and treatment of digital information. Nicholas Negroponte, in his book *Being Digital*, defined digitality as the state of living in a digital culture, proposing a historical intersection between the pre-digital and digital worlds by analogy with the distinction between modernity and post-modernity (Negroponte 1995: 255). That means that digitality describes a new social-historical form of life, a new way of being, and an existential determination, which, let us say in advance, is grounded in the human existential structure of communicating.

Consequently, digitality accompanied by an institutional transformation, means the emergence of a particular field of the social imaginary that refers to a new ontological determination - the ontological field of the digital world, whose semantic, communicative, and social surface is cyberspace. Nevertheless, cyberspace as such constitutes a quasi-autonomous semantic digital world, a

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universe of significations that cannot be analyzed based on technical infrastructure but on the basis of the social-historical environment determined by the actions of the 'user community'. In other words, while the technical infrastructure of digitality is primarily a technological problem, the functioning and effectiveness of cyberspace are primarily social and political problems.

It involves society beyond the boundaries of computer and information science, as it creates a virtual but active public sphere, a common space for communication and the production of meaning - i.e. shaping what is said and guiding what can be done. New words, such as googling, sexting, spammers, etc. have entered our vocabulary. They are not technical terminology but new ways of disembodied interaction, new functions, new applications, new forms of behavior, and new dimensions of distance communication. They are new semantic stones of saying that correspond to new forms of doing. They are elements of a new field of social-historical praxis.

### The social-historical conditions of the Internet

There could not have been the Internet, as a global network for the flow of information, and the World Wide Web (www), as a common way of organizing information if the Cold War had not ended with the dissolution of the USSR in 1991.

And yet, on the other hand, the Cold War was the original cause and political motivation behind the development of digital internet technology. The beginning came after the successful launch of the first space satellite, Sputnik, by USSR, which led the US to establish a government defense research agency called ARPA (Advanced Research Project Agency). As part of the research work, J.C.R.

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Licklider, Paul Baran, and Leonard Kleinrock laid the three theoretical foundations of a global digital information transfer network. The first envisioned the creation of a network of interconnected computers that could exchange information securely and without residue. The second designed a distributed and decentralized digital communication network. The third proposed the conversion of data into information packets containing their origin and destination, creating a stable and oriented flow of communication between computers. The first digital network created in 1969 between four computers at the University of California was called ARPANET. Similar closed networks were created between other research centers in the Western capitalist world. But the dividing line between the Western and Eastern 'blocks' had to be broken down to create the Internet as a global internet, open, public, and accessible to everyone. In 1991, Tim Berners-Lee of CERN invented the tools to make access to the Internet organized, accurate, and user-friendly, through the invention of the World Wide Web (www), the Hypertext Transfer Protocol (HTTP), the unique URL to locate each digital document, and the single language for describing documents (HTML), i.e. the web browser and the web server.

As expected, the creation of the Internet was not the result of a linear evolution but of an irregular interaction between the techno-scientific apparatus, state power, and international relations. As we have said, one social-historical precondition was the particular international situation created by the Cold War, i.e. the division of the entire planet into two rival camps, each of with its own supranational and transnational networks of propaganda, information, and knowledge exclusivity. This bipolar world led to an apparent techno-scientific competition between two quasi-global international formations, which had the unprecedented ability to exploit vast material resources for specific and planned purposes. The existence of this

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bipolar organization of the world was a sufficient social-historical precondition for the creation of Internet technology, even though the overcoming of bipolarity after the collapse of the USSR was a necessary social-historical precondition for the spread of the Internet as a public good.

The other social-historical presupposition of the Internet is also embedded in the Cold War context but also has epistemological implications for all humanity. It brings a radical transformation to the overall social imaginary, which for the first time has created a tangible sense of universality and global community, while also an impulse to transcend planetary boundaries. That change passed through the space rivalry between the two superpowers and the struggle for the "conquest of space" for political propaganda purposes.

The space race is of particular importance for the development of the Internet because both technological ventures belong to the broader Cold War techno-scientific competition, so many technical innovations used in digital technology came from the needs of space missions. Moreover, the conception of the Internet presupposes a solid conception of the planet as something finite and unitary and of humanity as a social-historical entity that transcends it. This change of perspective, as important as the Copernican heliocentric revolution but less discussed, becomes a fact with the most emblematic episode of the space race, the arrival of man on the Moon.

Perhaps today we may not fully understand what that meant. So we will digress a little, starting with a quote from the phenomenologist Edmund Husserl:

*"Die Erde bewegt sich nicht [The earth does not move]."*

Husserl boldly sought to invert Galileo and Copernicus, who deconstructed the Earth from the immobile center of the universe - not to expound an alternative scientific

theory, but to show the difference between the established scientific view of the world and the subject's experiential experience. We know scientifically that the Earth moves, but we experience the Earth as the measure of all movement, as motionless.

*"But if this is the case, need we say with Galileo: par si muove? And not on the contrary: it does not move? It is certainly not so that it moves in space, although it could move, but rather, as we tried to show above, the earth is the ark which makes possible in the first place the sense of all motion and all rest as mode of one motion. But its rest is not a mode of motion."* (Husserl at the Limits of Phenomenology: 150)

For the German-Jewish thinker, the Earth emerges as a pre-experiential and pre-transcendental, i.e. before any observing consciousness, a constitutive matrix of experience. The Earth is the capable and necessary condition for the constitution of the body that is the sole and motor support of consciousness; the Earth provides the ground and environment of the world that stands against the subject and appears as the proto-mind, the shadow of every mind. Consequently, the Earth, as the reductive place, as the cradle of the human being, is the model of all origins, in the sense that a being born on the Moon will regard the Moon as the Earth, that is, as an immovable ark.

*"Why should I not think of the moon as something like an earth, as therefore something like a land for animal habitation? Indeed, I can very well think of myself as a bird flying off from the earth to a body that lies far away, or as a pilot of an airplane that flies off and lands there. Certainly, I can conceive of human beings and animals already being there. But I ask, perhaps, "how have they gotten there?"—then, just as similarly in the case of a new island where cuneiform writing is found, I ask: How did the people in question come there? All animals, all living beings, all*

*beings whatsoever, have ontic being only on the basis of my constitutive genesis and this has "earthly" precedence."* (Husserl at the Limits of Phenomenology: 130)

The meaning of the being of living beings is determined by the primary place of generation and living, by the world that emerges from the constitutive environment, as a constitutive association of the Earth and the subject in a transcendental totality and an empirical unity. This is what Husserl was writing in 1934 when the Moon was a reflection in the telescope, a depiction in astrological maps, and above all, a mythical creature in the common-historical imagination. A mythical creature that, in antiquity, was seen by some as a living being and by others as a small Earth with its own Moon people, as in Lucian's *True Story*.

On 21 July 1969, two American astronauts, Buzz Aldrin and Neil Armstrong stepped on the Moon. For the first time, humans saw and experienced the Earth not as Husserl describes it, as a stationary ark, but as the Copernican revolution taught us, as a planet in the starry sky. We might assume that for the astronauts themselves, for the few hours they spent in the lunar landscape, the Moon was motionless. But that is not what Husserl is telling us; he is not talking about a perspective but about a constitutive genesis. The astronauts carried the Earth to the Moon, they carried their earthly gaze to the lunar terrain. But in doing so, they saw the real Earth as the Moon, they stood precariously against the pre-conscious matrix of earthly consciousness, and they saw themselves outside the Earth.

Here we reach the limits of Husserlian phenomenology, which are the limits of the Ego. The astronauts did not arrive on the Moon as lonely consciousnesses, they were not even thrown there, and they were not uprooted from their Earth. On the contrary, they carried out and executed a governmental program, they implemented a first

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political and then scientific project, and they carried to the Moon not only human consciousness but also an American flag. They went not just as human subjects but as members of a mission under the auspices of the most powerful state on Earth, amid the Cold War, amid a multi-level competition between the United States and the USSR for dominance of the Earth's cradle. Indeed, the two astronauts carried the Earth to the Moon, but not the Earth's environment, but American institutions and their real constitutive genesis, their social-historical imaginary.

Of course the Earth, as the real cradle, as the matrix of all imaginary homelands, is a constituent element of the social imaginary, and provides the first frame of any geometry, in the broad sense. But geometry becomes geometry when it escapes from the empirical view of the Earth to the abstract view of geometric magnitudes when it posits as elementary axiomatic entities the line, the point, the circle, and the plane, which do not exist anywhere on Earth as such.

Is Earth the primary experiential cradle? Should we not assume that, as far as the living being is concerned, the primary experiential cradle is the actual womb, whether it is the seed or the mother's body? Should we not infer that as far as the species in question is concerned the primary experiential cradle is the species itself, that the primary cradle of life is life? Does not the living being create categories and functions that do not exist in the world of stone and inanimate matter, such as purpose, reproduction, survival, and the transformation of energy into something else? Doesn't it create analogy and self-causality?

Yes, but also every living thing creates its idiosyncrasy within an ecosystem. Life is always abundant. There cannot be an isolated species, just as there cannot be an isolated individual. Therefore, the primordial cradle is already a world of life, the Earth is the place of the

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unknown raw material per se, but each species is differentiated as a form according to the meaning it gives to this world, the meaning it makes the world have.

And the meaning of "conquering the Moon" is a common-historical meaning. The primary cradle of man is society, and society seems to have extended beyond the Earth, to have empirically touched its natural environment from the outside. This imagined expansion of humanity beyond the planet involves two dimensions.

One is the hubristic dimension of rational dominance over nature, the central imaginary meaning of capitalism, which is the guiding vision of the mission itself. Let's listen to two scientists from 1963, six years before the moon landing, writing in the political magazine *The Atlantic* to argue for the mission:

*"However, while science plays an important role in lunar exploration, it was never intended to be the primary objective of that project. The impetus of the lunar program is derived from its place in the long-range U.S. program for exploration of the solar system. The heart of that program is man in space, the extension of man's control over his physical environment. The science and technology of space flight are ancillary developments which support the main thrust of manned exploration, while at the same time they bring valuable returns to our economy and our culture. The science which we do in space provides the equivalent of the gold and spices recovered from earlier voyages of exploration. It is the return to the taxpayer for his investment in his nation's future. But the driving force of the program is not in scientific research alone, valuable though that may be in the long run. Thus, the pace of the program must be set not by the measured patterns of scientific research, but by the urgencies of the response to the national challenge." (Jastrow & Newell 1963)*

The two scientists are honest and, in keeping with their times, insensitive to the tragedies of the genocidal

colonial policies of the past. Science is of secondary importance to this persistent mission. The priority is the 'extension of human control', economic profits, and the political domination of the USA in the international, terrestrial, environment.

In this sense, the two astronauts carried to the Moon the dominant economic and political antagonisms of Earth and their "constitutive ground", namely the dominant imaginary of unlimited rational control and state and capitalist hubris. For, as we know all too well, control of "man over his natural environment" means control of the state over human society and nature, control of the human environment by institutional mechanisms.

The black poet Gil Scott-Heron was right to say, in the early 1970s, "*I can't pay no doctor bills, but Whitey's on the moon.*"

But there is another dimension. Because the threshold that the astronauts crossed was, in a sense, crossed by all of humanity. This was helped by the televised broadcast of the mission around the world, a broadcast that, amid the Cold War, brought a first sense of global community of interest.

Precisely because the Moon has never abandoned humanity's fantasy, Armstrong's step on its surface cannot be limited to the American public alone. And in his famous phrase, "One small step for man, one leap for mankind," mankind is referred to, not the U.S. alone.

Humanity, which is also an imaginary significance and at the same time a constitutive universality, acquired a new substance before the platform of Armstrong that transcends the strict social-historical environment, precisely because this "conquest" was not made at the expense of another part of humanity. The moment a man stepped on the Moon, he was not uprooted from the Earth

as a separate subject, but all of humanity was uprooted with him from its immobile Earth, the seed of the scientific fantasy of the "interplanetary species" was born. And in its uprooting, all humanity was united in one small step, forgetting, in the new ambition of an infinite horizon, the finite impermanence of its earthly existence.

So we have a second, paradoxical and fictitiously contradictory, dimension. Or the solidarity and unity of humanity expressed through a will that combines knowledge, domination, the assumption of responsibility, and the ambition of absolute control. We have the antithetical and antagonistic, heterogeneous amalgam of significations that is the contemporary social-historical imaginary, where the significations of human quest for knowledge and solidarity are intertwined with the heteronomous tendencies of domination and hubris.

That unity was momentary and immediately fizzled out. 12 white men stepped on the Moon, a sample of the dominant minority of Earth society, but no one since Armstrong has captured the world's attention. But we live in a post-lunar world. Its legendary descriptions, as well as a number of works of film, comics, and literature, have helped to etch the dangerous fantasy of the 'interplanetary species' into the modern imagination. Or cautious humanity admired the Earth from across the sea and at the same time degraded the Earth to the position of the Moon. As a place to be exploited without end, as an outer planet, not as a territory but as a prison for humanity.

The change of perspective brought about by July 21, 1969, is unique and, to some extent, frightening. It is no accident that the conspiracy that the moon landing did not happen. It expresses the traditionalist's terror of the expansion of the social-historical horizon into a place where the traditionalist has no jurisdiction.

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In this sense, we can only welcome this new gaze that relativizes man's place in the universe and shakes traditional myths. On the other hand, we cannot let this new gaze cloud our vision. At the same time, it increases the distance between technological man and earthly nature and confirms the self-destructive appetite for rational control of the real. The astronaut's gaze seems both liberating and solitary. It is neither one nor the other entirely. The astronaut has never been alone on Earth. He is always watched and monitored by cameras from Earth. Otherwise, he would have died of his own accord. He does not exist on the Moon as a human being but as a human member of a political and techno-scientific apparatus.

The fact that we cannot deny how great the achievement of the mechanism has been should not lead us to blindly worship technoscience, nor should it blind us to the declared, anti-human, aims of the state machine that runs it.

We need to see it as a phenomenon of a wider social-historical transformation. This broader transformation includes the creation of the Internet. After all, ARPANET, the closed Internet precursor to the Internet, was launched in the same key year as the moon landing, 1969.

Since then, the Internet and the World Wide Web (www) have created new fields and ways of coexistence. Their emergence and spread is a social-historical cross-section that separates two eras of human civilization and completes the informational globalization that began with the first destructive and genocidal contact between Europeans and the natives of the Americas - which put an end to the geographical separation of humanity.

As such, the Internet cuts across generations, in the sense that it shapes entirely new spaces of experience and horizons of expectation for human subjects.

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My generation (I was born in 1978) is the generation of transition. It is more or less the last generation with vivid experience and lived memory of the pre-digital world. This allows us to have a double vision, of the past and the present, and to feel more acutely the transformations of human relations that have occurred as a result of the digital revolution. One important transformation that is not easily perceived is that the Internet did not appear in some rural societies but in a society dominated by the information monopoly of television. Television as a medium based on the asymmetrical model of the active transmitter and the passive receiver, as a medium that 'was' the message, as Marshall McLuhan used to say, marked the rise of irrelevance by projecting the imaginary significations of consumerism, passivity, advertising, and flat, interchangeable aesthetics. The Internet has abolished the passivity of the user, the monopoly of information, and the one-way flow of information.

In addition, and perhaps more importantly, the Internet for the first time in history offers a real sense of materialized universality and online humanity. It creates a global space and a global time through the digital transcendence of physical borders and time constraints. It unites the private with the public and the local with the universal. Of course, this new horizon does not remain uniform, as it is fragmented into digital communities that nevertheless occupy the same abstract and ideal space.

The invention of the Internet has been called a "revolution" in various senses. Digital revolution, information revolution, or the 4th Industrial Revolution. In my opinion, the digital internet phenomenon is more than just a technological revolution. The Internet marks an ontological revolution.

By 'ontological revolution', I mean the emergence not just of a new type of being (as we would consider the elementary digital unit of information, the bit, which exists

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in the social-historical as a particle/ wave/ element semantically charged), but of a new level of reality, within the social-historical field, the digital world.

The particularities, possibilities, and problematics of this field are opened up both in the ontological-phenomenological context (Qvortrup 2002) and in the ethical field (Brey 1998, 2000; Capurro 2004, 2010).

This is not a world separated from physical reality, as Baetens, J., de Graef, O. and Mandolessi, S. have demonstrated (2015), challenging the widespread view of a radical separation between analog and digital culture. Instead, the authors consider analog and digital as two complementary forms of intellectual interpretation of the world, arguing that, on the one hand, human thought has always been characterized by certain forms of digital encoding in terms of communication and architectural design, while on the other hand, essential parts of the old analog culture not only survive but are enriched by their interaction with new digital technologies.

### Informational Ontologies

Cyberspace constitutes a new, seemingly independent but essentially co-dependent social space, suggesting new ways of creating virtual space and new topologies without bounds. It thus makes the possibility of designing various digital methods for managing and organizing the data that comprise individual information 'ontologies'.

A clarification is necessary. The term 'ontology', which has been part of the philosophical vocabulary for centuries, takes on a new meaning in the context of information theory. In this context, 'ontology' refers to a representation whose elements, i.e. categories,

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properties, and relationships between entities, i.e. concepts and data, are classified and organized in precise correspondences. These are methods of organizing information in data based on a given architecture of relationships and priorities.

There are domain ontologies that define the classes of objects and relations of a domain. There are also upper ontologies that regulate the classes of objects and relations of other domains.

According to Castoriadis, the basis of such ontologies is the ensemblistic-identitary ontology, which is based on the category of definiteness, the principle of identity, and the prescriptive schemes of distinction/unification, organizing distinct and well-defined entities in ambiguous relations of precise ordering.

We know that such an ontology will be either consistent or complete, as its axiomatic bases cannot be checked. It is still a practically oriented technique, grounded in the ontological axioms of commonsense logic. Secondary ontologies in computer science show how a finite set of axioms provides a testable and analyzable framework for organizing a multiplicity of data into information.

However, artificial ontologies also represent finite structures within the wider social-historical matrix, where data are transformed into meaningful information, in open interaction with the public field of social imaginary significations. As J.P. Dupuy wrote: "*The dynamic return of meaning was inevitable.*" (2000)

The French scientist observed that the flow of information does not in itself create meaning. On the contrary, reducing information to a defined and distinct set of communicational units impoverishes the semantic field by confining it to the code. Dupuy speaks of the danger of losing the unpredictable in the digital world of

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mechanized communication. He describes this dystopia as a communicative 'hell'.

*"I use the word hell in its theological sense, that is, as a place that lacks grace - what one does not deserve, what is not necessary, the unexpected, the unpredictable. In this particular case, something paradoxical is happening: we pretend that our world has more and more information, but it seems to us increasingly devoid of meaning."* (Dupuy 2000).

Nevertheless, this invasion of meaning and knowledge in the digital world of information is an external invasion, it is the result of the socialization of digital communication, of the immersion of the information code in the magma of social imaginary significations. When we ask for meaning we explore the social-historical realm and enter the clearing of public space and time, the clearing of meaning and politics.

In contemporary political discourse, and the English-speaking world, the debate between individualists and communitarians is moving into the new field of e-governance and digital democracy. As early as the 1970s, Castoriadis observed that ICT makes it possible to provide the population with the necessary information to make 'informed' decisions. However, this optimism has been called into question by the application of information technology in the political arena, with "fake news", trolling, and the creation of what Hubert Dreyfus called "*nihilism on the information highway*".

What does "community" mean on the Internet? Albert Borgmann sees the Internet as the "foil", not the focus of the final communities. We could consider such communities as fandom, digital communities of users who come together on the common ground of their adoration of a pop idol or a movie star or a sports club, but, even more so, their adoration of a game, whether desktop (classic RPG - Role Playing Games, such as D&D)

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or digital (MMORPG - Massive Multiplayer Online Role Playing Games, such as WoW).

The creation of such communities that are fed back by discussing or playing monotonously and repeatedly, has led to the emergence of a new digital economy and a new digital culture that expands like concentric circles, with the fetish product (idol or game or whatever) being at the center while hierarchy levels are determined by access to the product. A corollary of this economy is the creation of closed cycles of digital value production that can gain immense economic power by drawing on the financial contributions of community members. A D&D board game fan site called *Critical Role* raised \$13 million from contributions from other members of the game's expanding fandom.

Of course, digital communities can be created based on any common taste, ideology, or worldview that lends itself to the production and reproduction of digital fetishes or memes. Such are all political ideologies. However, the very nature of digital communication, with privileged use of symbols as pictograms (emoji etc.) and the mimetic restriction of dialogue (memes), favors ideologies based on established imaginary stereotypes, i.e. nationalist, racist, and sexist views. The digital pseudonym of the sub-text-user helps to de-identify extreme, marginal, or irrational theories and to disseminate them without restrictions.

Let us also note that this type of digital community, which defines itself as a community, seems to transcend and overlap with any historical society, reversing the classical schema between community (Gemeinschaft), as determined by common customs and traditions, and society (Gesellschaft), defined by political institutions. Thus, any digital collective can utilize the classical schema of a community lacking political institutions to expand as an "independent" community.

I believe that the emergence of the Internet constitutes a historical break in the social, epistemological, and ontological field. The digital world opens the way for a new philosophical anthropology, which offers a dual interpretation. On the one hand, the Internet opens up the possibility of a new digital democratic humanism, characterized by horizontality, free exchange, dissemination of information and research, free communication, and digital commons. On the other hand, it equally opens up the possibility of a new digital semi-totalitarian anti-humanism, if the emphasis is placed on the expansion of systemic structures, the development of capitalism, the expansion of neoliberalism, the trade in data and information, the registration of the population, the disembodiment of communication, social isolation and the control of history from above. The difference between the two perspectives is political and lies in the meaning of digital communication as a public act.

### Digitality and temporality

Nicholas Negroponte has argued that digitality means a form of life and a new way of coexistence between people and the world. On the opposite side, the French-Argentinean scientist Miguel Benasayag, in his book *Il cervello aumentato, l'uomo diminuito*, observes that, unlike previous inventions, from the wheel to antibiotics, digitization does not create a new way of inhabiting the world for man, but rather distances man from the world and from his power to act, even though it unleashes computational force at the technological level. He considers that digitization abolishes the diversity of beings as well as the fluidity of persons due to the disintegration of communication and the transformation of knowledge from direct to indirect.

On the one hand, we have a technophile approach, and on the other a technophobic approach. Both seem to disagree on whether the digital world is an extension or a negation of the physical world. The criterion should be what we consider real. To explore this question, we need to question which form of life suits the expansion of information systems. That is, we should turn our attention from the interior of the unitary machine to the information ecosystem created by the networked cooperation of many computing units, that is, cyberspace.

However, before we examine cyberspace as a field of interdisciplinary circulation of significations and production of social representations, we need to answer the question we posed earlier. We have seen that computer software, the operating system, and algorithmic programs, implement the operant schemas of formal logic. It uses exclusively the tautological time of periodic iteration in a finite, fixed, and reactive manner. The only events within the algorithmic system are the recognition and processing of simple input data and their extraction as information according to fixed rules tailored to the purposes of the human subject.

My computer is currently running Microsoft Windows. The bottom right of the screen records the exact time and date in my official local time zone. According to the official Microsoft document, for example, the date and time function that accurately gives me this measurement does the following:

*"It creates a date-time value from the file Time value and converts it to the local time zone. The file time is a Windows file time value that represents the number of 100 nanosecond intervals that have elapsed since midnight, January 1, 1601 A.D. C.E. Coordinated Universal Time (UTC)."*

All of the above quantities are of course arbitrary points in time set by our society according to arbitrary but validated

systems of chronological, calendar, and clock measurement, such as the Gregorian calendar which is the basis of the date of the beginning of measurement, which was also arbitrarily chosen by the manufacturer of the operating system.

Let's say, the Unix operating systems started counting at midnight on January 1, 1970. In any case, whatever minute one would choose to begin any coherent time measurement system that would be equally appropriate, since the measurement is not really about time but about the repeatability of a motion in situ (e.g. oscillation or regression).

However, according to epistemological principles, both the computing machine and the subject-user (or maker) exist within the social-historical field, which is also a field of the interweaving of multiple temporalities in historical time. We posited that temporality is interwoven with the emergence of otherness, that historicity is the form of the temporality of the human subject as a social subject, and that the historicity of man is also realized in his artifacts. Consequently, temporality is both a condition of existence and a criterion of differentiation of the other different areas.

Temporality has a triple meaning concerning cyberspace, but it belongs outside the digital space, in the wider social-historical one:

1) On the physical level, the constant and regular flow of the tautological "objective" time is the necessary and sufficient condition for all electronic functions and the flow of the electrical pulses that constitute the material infrastructure of the system.

2) On the social level, the invention of cyberspace marks the creation of new forms of communication, the temporal interconnection of subjects, and leads to a multiplication of interacting subjective temporalities.

3) On the historical level, the invention of cyberspace marks the beginning of a new era, the digital or information age, which divides history into pre-digital and digital. My generation, born before the 1990s, will be the last to remember the pre-digital era, bringing with us an experience of a radical transition that also defines our historicity.

For the computer, more than all the artifacts of our society and our time, the general principle formulated by Castoriadis applies:

*'The object is nothing as a technical object outside of the technical ensemble (Leroi-Gourhan) to which it belongs[...] Finally, this object is itself a product; its genesis therefore involves the totality of the social existence of the collectivity that gives birth to the object: not only its "mental aptitudes" but also its organization of the world and the specific bias that characterizes it.'* [CoL:313]

<https://notbored.org/cornelius-castoriadis-crossroads-1.pdf>

The computer differs from other technical objects because, in addition to being a data-processing machine, it can also become a node for activating a communication network that carries information and significations rather than just data. It activates a form of digital interconnection that creates an interactive digital semantic world which not only reflects but also transforms social reality. Cyberspace, as a form of inter-subjective tele-communication, goes beyond the technical set to which the computer as a machine for processing digitized data belongs and extends to the range of the most important of all "techniques", the regulated network of social relations.

Within this network, cyberspace emerged as a new ontological field of digital existence and high telecommunication, reorganizing it, enriching it, and

redesigning it, not in a mimetic but in a radically new way. Technique in general is also a social activity, theoretical and practical, of transformation of the existing, but also a social activity of creating realities by use of instrumental rationality:

*"Technique thus divides the world into the following two basic regions for human making/doing: the one that resists in every way and the one that (at a given stage of history) resists only in a certain way. It constitutes, in brute reality, that in relation to which one can do nothing and that in relation to which some making/doing is possible. Technique is creation qua arbitrary use at once of the rational makeup of the world and of its indeterminate interstices."* [Castoriadis, Crossroads: 306]

The boundary between the digital and the real is porous like a permeable membrane, because the digital, like any perception of the real, is part of the social-historical. Nevertheless, the emergence of ICT and AI technologies is an ontological revolution because it does not merely carry out a division but a representational reduplication of the socially real. The online world creates, insofar as we refer to the human imaginary, both for the subtext and for society, a completely new site of its reflection and investiture, hence a new field of significance transformation.

So what is cyberspace? First of all, the term "cyberspace" was not coined by a computer scientist, but by the science fiction writer William Gibson, who introduced the term in 1984 in his short story *Neuromancer*, the seminal work of the cyberpunk movement.

In May 1990, the First Conference on Cyberspace was held, which established the term. The optimism about cyberspace as Virtual Reality is highlighted by a speech by Michael Benedikt of the University of Texas, who describes cyberspace as one of the virtual spaces that are not real in the material sense, [therefore] many of the

axioms of topology and geometry can be violated or reinvented, as can many of the laws of physics. (Benedikt 1991: 119)

Benedikt's optimism, powered by his imagination, helped him perceive cyberspace as a space of escape from the constraints of physical reality, even before the Internet became a mass phenomenon. As an alternative space that the topological imagination can recreate without external boundaries. The metaphysics of space that accompanies cyberspace is evident from the outset.

According to Michael R. Heim, the conference presented two visions of Virtual Reality (VR), the first "*as a gateway to a private world of simulation where physical senses are immersed*" and the second "*as a communication tool where human contact overcomes the limitations imposed by the peripheral sensory data passing through the electronic network.*" [Heim 2014: 116]

Both approaches were bridged by the digital games industry, which created distinct and indistinguishable virtual worlds and corresponding communities of gamers; and then by the Internet, which created a global, ubiquitous, and uninterrupted public cyberspace, a broad virtual reality. As Heim complains, the terms 'virtual reality' and 'virtual world' have become so widespread that the conceptual scope of the terms has become vague and blurred.

How can we clarify the situation? Heim examines the various transformations of the English word "virtual" which originated in ancient Rome, where it came to mean physical strength and virility (from the Latin *vir*), was handed down to Roman Catholicism, where it was identified with virtue and came to mean the potential/virtual, that which has no separate substance/substance and, in some interpretations, the unreal.

The paradox of virtual reality, according to Michael R. Heim, is that the more virtual a culture becomes, the more the distinct notion of virtuality fades and, over time, virtuality is absorbed into the reality of its culture. This means, however, that the meaning of virtuality includes potentiality as the absorption of the virtual from the real manifests itself as a spreading of the potential of the virtual into the wider social-historical environment, i.e. the formation of a wider culture where virtual tools and products (including the avatar) are neither separate nor hard to find. Heim expresses the paradox that the more virtuality spreads, the more invisible it becomes. It seems as if it returns to the element of potentiality it contains, becoming the potential precondition, the capable and necessary condition, of a new "hybrid" or 'mixed' social-historical environment.

In contemporary popular imagination, virtuality is identified with digitality, according to Negroponte's definition of digitality as a broader culture. Digital culture is virtual culture - but this does not only mean a culture of imagery but also a culture of potential worlds.

What is cyberspace in practice? It is the highest, superficial, and ontologically autonomous realm of the Internet's tripartite hierarchical structure. And what is the Internet? Floridi gives us a simple and comprehensive definition of the Internet as the 'totality of three different spaces:

- Infrastructure/Hardware (the physical dimension)
- The mnemonic platform/Software (the digital dimension)
- The semantic space (the dimension of cyberspace)" (138).

Cyberspace is ontologically autonomous because digital entities are semantic, including different categories of association that are appropriate for them. Therefore, more than any other technological mechanism, the cyber

user can navigate precisely within cyberspace and manage digital objects effectively (with scalable efficiency), without requiring technical knowledge of the hardware infrastructure or digital software. It is worth noting that a schematic distinction between the digital (the mnemonic platform that forms the digital environment for registering software and documents) and the virtual (pure cyberspace) has been blurred via linguistic practice and custom. When we speak of the digital world we mean cyberspace, virtual reality in the broad sense. When speaking of "virtual reality" in the narrow sense, we talk about a specific digital holographic and three-dimensional representational application.

The semantic field is not a phenomenon of emergence from the lower levels of the Internet, but a phenomenon of colonization of the technical by the non-technical social imaginary significations. In both digital and public spaces, active subjects interact through the exchange of information and the internalization of significations - the machine does not process meanings. Cyberspace is dependent on the physical infrastructure as an external necessary condition, even though at the semantic level it is autonomous from the physical infrastructure - it only acts as a network for the transfer of significations between human subjects. While the technical infrastructure is the external necessary condition of cyberspace, however, the sufficient and necessary conditions of its existence are a group of users available to telecommunicate, i.e. the active human subjects who are the real nodes of intersubjective communication and collective meaning-making.

We need to make a necessary distinction here, between the Internet and the World Wide Web (www). The Internet existed as a digital information network, first in its limited, closed form as a network for communication between universities and scientific laboratories and then in its

open form as a global system of interconnected computers using a common set of protocols (Transmission Control Protocol/Internet Protocol - TCP/IP) and constituting the global and universally accessible cyberspace. The World Wide Web is the most popular (but not the only feasible) way of organizing cyberspace and was invented by Tim Burners-Lee, an engineer working at CERN, who also created the Hypertext Transfer Protocol (HTTP) and a prototype way of identifying and recognizing each digital document according to a unique universal identifier and a fixed address, the Universal Resource Locator (URL). Having thus completed the first web browser in 1990, he also created the first web server and the hypertext markup language (HTML) to denote each document.

### The logic of the hypertext

A hypertext is a digital set of segmented and short semantic units distributed as nodes in a network of embedded hyperlinks, which act as fixed references that allow users to explore the various contents. The hypertext is, therefore, a form of information organization based on active referencing, providing a two-way, dynamic, and variable interface between the user and the content. Hypertext allows users to make multiple choices and multiple paths combining readability and accessibility with random navigation through various documents or multimedia on the web.

According to Wikipedia, hypertext is a non-linear text a way of organizing information (found in text form) that goes beyond a basic limitation of existing means of organization: their linearity.

Floridi criticizes the view of the non-linearity of hypertext, by listing four possible states of linearity of an information system:

- 1) It is syntactically linear, i.e. its symbols are arranged sequentially.
- 2) It is semantically linear, i.e. its significations form a linear narrative.
- 3) It is linear in terms of transmission, i.e. it is transmitted sequentially.
- 4) It is linear in terms of access and retrieval.

According to him, a novel, regardless of its plot, as a form is linear in the first and third sense, a film as a form is linear in the first, third, and fourth sense, while a hypertext is linear only in the third sense, as each separate path through the hypertext remains linear.

Hypertext is a relational organization of digital documents, and the available retrieval paths are drawn ex-post according to the user. The human subject-user imparts semantic linearity, i.e. narrativity, to the hypertext via a process of labeling and referencing that may even seem associative.

It is the realm of information, as an ever-changing mental space, where databases and cyberspace are the latest outgrowth of this process. The infosphere is an ever-expanding system of all data, information, and knowledge encoded in some medium, linguistic or physical.

Does the infosphere identify with the ideality created by the social imaginary? It concerns at least one dimension of the symbolic network of signs, namely their dimension as defined signs with defined referential relations, i.e. the identitary dimension. We can think of it as an identitary relational and connective organization of information, in which case the digital cyberspace is its purest form, and the hypertext is its symbolic and logical structure.

Let us return to the first definition of the concept. According to Kenneth E. Boulding who coined the term in 1970, the infosphere is the part of the biosphere that depends on a network of information flow. (1970)

As we see in this definition, the infosphere is a growing repository of coded knowledge and a defined, relational, or connective flow of information that does not cover the full range of society.

Social imaginary significations are not limited to their symbolic representation or depiction. As Castoriadis reminds us, there is always an under-symbolization of meaning because relative indeterminacy is an essential feature of the phenomenon of the symbolic signification of the world by the human imaginary:

*"At the most elementary level, this indeterminacy is already clearly indicated by the phenomenon of the over-determination of symbols (several signifieds can be attached to the same signifier) - to which must be added the inverse phenomenon, which could be called the over-symbolization of meaning (the same signified is carried by several signifiers; in the same code there are equivalent messages; every language contains 'redundant features', and so on)." [The Imaginary Institution of Society: 138]*

We therefore approach the infosphere as the visible, coded-information part of the wider magma of social imaginary significations. Since the social imaginary significations form a magma in totality, the infosphere is a coherent structure - a discrete set - that is constituted within it. The social imaginary significations exist as a whole array of indeterminate referents. The infosphere is a potential open network of information and defined references. The infosphere is constituted as a carrier of meaning, but meaning itself is a social-historical creation of the social imaginary involving collective investments, feelings, and dispositions that go beyond mere information. Therefore, we consider the infosphere

ontologically equal and quasi-contiguous with cyberspace on the understanding that what can be digitized from the sphere of ideation created by society belongs to the infosphere. But this makes further use of the concept relatively unnecessary and redundant.

But Floridi points out another, hidden analogy, asserting that reality itself and its events always exhibit a linearity because they are semantically serial and asymmetrical. This is an ontological statement; in which we should give special weight to the word "semantic".

A socially instituted meaning always exists relative to a subject. If there is any semantic seriality it can only exist as a narrative seriality. Semantic seriality creates narrative linearity because it constitutes a simple order of juxtaposition, where one meaning precedes or follows the other, taking the place of a premise, a conclusion, or a point. Indeed, when we speak of the semantic field, we are talking about a matrix from which we can draw an indefinite number of chained correlations and corresponding narrative paths. When we speak of the physical field, we refer to a non-conscious magma that is nevertheless oriented by the non-reversibility of the natural flow of time. But this is only to the extent that we adopt an imaginary representation of the historical flow that is compatible with non-reversibility. The temporal ordering of events defines their meaning and creates different narrative paths whether we narrate based on linear, cyclical, regressive, or spiral historical patterns.

It is useful and clarifies this admission of narrativity in the semantic rendering of the hypertext. On the one hand, narrativity presupposes a subject who narrates. On the other hand, the hypertext's ability to contain unspecified narrative paths is an indication of the subject's creative imagination since the hypertext does not provide any privileged narrative path. It seems to me that, contrary to the precepts of postmodernism, the hypertext brings to

the fore the autonomy of the human subject vis-à-vis the coded text.

But is the meaning of a text exhausted in the reader? Of course not.

Because, as Quentin Skinner would say, the meaning of a text has a triple dimension, or there is a triple meaning of the text. The first is the significance of the words and concepts in the text as recorded in the dictionary. The second is the significance for the readers, and refers to the reinterpretation of the text by them. Meaning in the third sense responds to the author's intention that aims for tangible results i.e. it is a form of Doing.

The distinction between true and false is related to the question not of meaning in general but of correctness or validity. Both the true and the false are within the social field of meaning, and their distinction is a primary social institution of the constitution of the real. Because meaning and validity involve acts of communication, they contain a minimal element of rationality in the sense of non-contradiction and coherence.

Now, as Castoriadis observes, meaning and validity are social-historical creations, and there are two types of validity. Or de facto validity and de jure validity. The first is the positive validity of dominant social institutions and the dominant imaginary significations they actualize. The second is a questioning of the first. It is the questioning of instituted law and reason and opens up the problem of freedom of expression. But how is it constituted?

Through the force of explicit institutions of power or the authority of dominant meanings? Then, it would again be just a reproduction of de facto validity, as in heteronomous regimes. It is constituted through the self-assertion of the requirement of doctrinal reason, documentation, or proofs, not because of the authority of the speaker but because of the truth of the content. The

truth of a content itself relies on value judgment and its critical control. A truth that does not contain the transcendence of its potential doubt is not convincing.

De jure validity is a reflective value judgment based on common rules based on the equality of speakers. Equality implies freedom of speech, which presupposes equality. Or de jure validity constitutes the questioning of de facto validity that embodies instituted inequality. This is why, as Castoriadis points out:

*"Reason cannot be argued erga omnes. It cannot be argued except against those who accept the distinction between de jure and de facto and at the same time a certain number of rules (not merely procedural) that make rational discussion possible."*

What rules? Of course, non-contradiction and coherence are prerequisites of any effective speech, however, reflective deliberation and free logical dialogue also presuppose a degree of community on the part of the speakers and a common pursuit of truth. The selflessness of the speakers and the common demand for the truth are based on equivocation. Any self-serving distortion or concealment of the evidence distorts and destroys free debate and reflection. Freedom of speech also presupposes the responsibility of proving speech in the public sphere before equal judges.

For a common social project, it is not necessary to have identical value judgments. Basic and commonly accepted rules of equality and parity provide the social ground of communication and the political space for deliberation.

Therefore, any interpretation presupposes a basic framework that makes possible interpretations and their modifications, a framework that precedes the interpretations. This context is the magma of instituted social imaginary significations.

### Narrative temporalities

*"I take temporality to be that structure of existence that reaches language in narrativity and narrativity to be the language structure that reaches temporality as its ultimate referent."* [Ricoeur, Narrative Time]

Paul Ricoeur, in his monumental work *Temps et Recit* (Time and Narrative), studied the structure of temporality, arriving at three transgressions: the transgression of the opposition between phenomenology and cosmology in the philosophical field, the transgression of the opposition between factual objectivity and subjective narrativity in the historiographical field, the transgression of the opposition between the literal and the metaphorical in the linguistic field.

Ricoeur distinguishes, in terms of narrative, natural events from historical events. The former do not have a narrative structure, the latter do. Natural events are not caused by human subjects who only record them. On the contrary, historical events have no meaning without subjects who enact them. According to Ricoeur, temporality is manifested in language through narrativity, while narrativity is the linguistic structure that refers to temporality.

The human experience of temporality creates historicity through narrativity. This is why Ricoeur confronts historians who speak of "objective history", as there is no history without subjectivity. Thus he connects the two significations of the word "history", narrative (historiography) and the recording of events.

But why are temporality, historicity, and narrative connected? Because only their intertwining creates meaning. Meaning, Ricoeur argues, is produced by the linking of events into a plot on behalf of an acting subject.

Aristotle uses the term myth [mythos] to denote a dramatic plot in his *Poetics*.

The plot creates meaning, bringing together the circumstantial into a meaningful historical event. The acting subjects invest their actions with intentions and narrative arguments, drawing on the collective experience of the past and projecting the horizon of expectations of a future. In this way, they pre-figure the narrative plot of their actions in the social-historical field, without implying that their actions are rational or transparent.

Ricoeur follows Hannah Arendt, for whom the political presence of the subject in the public sphere gives meaning to individual life. In the political space, according to Arendt, over toil and labor, there appears praxis, which together with speech (lexis) gives meaning to human life different and redundant from ordinary life:

*"The chief characteristic of this specifically human life, whose appearance and disappearance constitute worldly events, is that it is itself always full of events which ultimately can be told as a story, establish a biography; it is of this life, bios as distinguished from mere we, that Aristotle said that it "somehow is a kind of praxis."* [Arendt, The Human Condition: 97]

Speech and action intertwined constitute the political space as the sphere of equality and freedom and democratic politics manifests itself as the political imagination of multiplicity and persuasion. Collective action reveals the hidden aspects of the world, inventing and producing histories, and creates the historicity from which meaning is constituted.

Historicity certainly transcends self-biography, it is not confined to the subject but penetrates and transcends it. After all, the long-term consequences of an act are never perceived by the acting subject. Then come historians, who enrich or transform past events into historical

narratives, remodeling their plots using the advantage of late wisdom given by time.

The difference between historical narrative and, for example, the journalistic or chronographic account of an event, lies in the 'secondary referentiality' of historical discourse, which does not simply record but seeks to understand events through critical reflection. The secondary referentiality depends on the public "structure of temporality" which imbues incidents with conceptual coherence, incorporates them into a new plot, and gives them the '*aura of historicity*'. [White 1987: 172]

Ricoeur does not remain only on this descriptive, external level. The connection between temporality, historicity, and narrative is radical, as it is a relationship that essentially creates subjective identity in an open-ended manner.

*"The world unfolded by every narrative work is always a temporal world. Or, as will often be repeated in the course of this study: time becomes human time to the extent that it is organized after the manner of a narrative; narrative, in turn, is meaningful to the extent that it portrays the features of temporal experience. [...] the circle of narrativity and temporality is not a vicious but a healthy circle, whose two halves mutually reinforce one another."* [Time and Narrative, v.1: 3]

The social imaginary temporality, the very feeling of time, at any given period, is co-dependent on the dominant narrative. Modalities of consciousness are changeable according to the transformations of the dominant social narratives.

Let us also recall that, as early as the late 1930s, Walter Benjamin opposed information in narrative precisely based on what we might consider to belong to the domain of historicity and duration, i.e. the preservation and enrichment of meaning.

*"The value of information does not survive the moment in which it was new. It lives only at that moment; it has to surrender to it completely and explain itself to it without losing any time. A story is different. It does not expend itself. It preserves and concentrates its strength and is capable of releasing it even after a long time."* (Benjamin 2019: 90)

In an information system, time is limited to minimization of duration. The structure of cyberspace and hypertext is, in this sense, both instantaneous, i.e. immediate transmission of information, and a-temporal, as the retrieval of information can theoretically occur at any time. As such it is a mechanism for fragmenting narratives as well as rearranging them, whose inherent flow of information, however, is not narrative. It is the effort of the subject-user that creates a narrative path through the aggregation of information moments, but which dissolves directly into its semantic particles as soon as attention is lost. Of course, the narrative paths are stored in the computer's memory and the user's 'search history' but this is merely a storage option that does not contribute to any kind of information synchronization.

But the narrative does not happen in a vacuum. Nor can it include everything. There is at least one individual level, the unconscious, which resists any narrative structure unless it is fragmented. For the subject to acquire a relative coherence of identity, he must delve into the unconscious motives of his behavior throughout his life. The deeper correlation between personal identity and historicity is also evident, at the individual level, in the process of psychoanalysis.

*"The practical essence of the psychoanalytic therapy involves the fact that the individual finds itself again as the partial origin of its history, undergoes gratuitously the experience of the act of making itself, which was not known as such the first time round, and becomes again*

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*origin of possibilities as having had a history that was history and not fatality.*" [Castoriadis, Crossroads: 35]

To conclude, dominant social imaginary significations determine both the scope and the degrees of freedom of each plot. If the plot is a narrative that unites action and meaning into individual identity and historicity, subjective temporality is informed by social imaginary significations. But we reached the limits of hermeneutics. Not everything can be expressed in the narrative form. The sources and the ultimate limits of social time are indeterminate, unclear, and indefinite, just as the depths of psychic time. Language is the primary tool for the reproduction and metamorphosis of social reality, but social reality is not limited to language. The diversity of natural languages alone is the proof.

Is social-historical existence limited to narrativity and the linguistic dimension of hermeneutics? Certainly not, even if we include in the linguistic dimension every symbolic form, even silent gestures, that are, however, especially expressive in the appropriate social context. The social imaginary, as a source of otherness, is infinitely deeper than its symbolic crystallizations. Moreover, symbolic crystallizations of the social imaginary accompany latent feelings and moods that cannot be accurately described explicitly in established language.

Ricoeur sees the human social-historical private world, if not over-determined, at least as an interpreter of a meaning already offered by the structure of the world, though open to infinite different reinterpretations. Human temporality is manifested in narrativity because the imaginary has an interpretative function. Nevertheless, this approach is also limited to the secondary symbolic representation of a deeper primary indeterminacy.

There is no objectivity without a multitude of subtexts - but there cannot be a multitude of subjects without the social-historical that makes them subjects either:

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temporality can only be social-historical, as there is no multitude except as a subcategory of society, not as an initial state. So, historicity and meaning are external to the digital electronic system because narrativity is not an algorithmic structure.

Cyberspace is not an emergent phenomenon of the rationality of the technical system but a phenomenon of the integration of the technical system into the everyday human social-historical environment. However, this means that it is a new field for new narratives, new reflections, and new identities. In other words, it is a new ontological field, the field of digital existence, telepresence. But what is telepresence?

## Chapter Two: THE METAPHYSICS OF AI

### The philosophical problems behind the development of AI

In 1956, amidst the Cold War, a conference of scientists at Dartmouth College in the United States announced the launch of a bold, scientific project, Artificial Intelligence (A.I.). The term Artificial Intelligence was coined by John McCarthy, who defined it as such:

*Every aspect of learning or any other feature of intelligence can, in principle, be so precisely described that a machine can be made to simulate it.* (McCarthy 1955)

This is the 'Hard' AI project, now evolved into the AGI project [Artificial General Intelligence], which was based on an approach that *mimicked* human behavior and aspired to create software and hardware whose behavior would ultimately be comparable, if not superior, to that of '*intelligent beings in similar circumstances*' (Floridi 1999). Fictional dystopias starring uncontrollable robots or other autonomous forms of AI all stem from this project.

After the failure of AI to produce functional machine copies of the human adversary, the 'Soft' AI movement emerged, based on a *constructivist* approach to the issue. That is, instead of being oriented towards imitating human behavior concerning specific tasks, it preferred to seek alternative ways of performing tasks based on the particular functions and structures of the machine. The applications of 'Soft' AI are those we see in the world of 'smart', 'intelligent' automatic devices (from voice, face, and biometric recognition to the regulation of the temperature of a room or the technical parameters of an experiment, etc., the execution of complex automated procedures with adaptation to changes) that is constantly

developing. We must bear in mind that 'Soft' AI rejects the "possibility of a thinking machine capable of cloning human intelligence." (Floridi 1999).

Floridi underlines that the 'Hard' AI program is based on the following metaphysical positions: a) intelligence is independent of the biological body, which it borrows from *rational, Cartesian dualism*, and b) intelligence is a complex property of a material body, which borrows from *materialistic monism*.

Together, it abandons, on the one hand, the Cartesian concept of *spirit* as *res cogitans* and the dialectical conception of the interaction of *matter* with *life* as an organic synthesis.

We discern a latent demand, the assimilation of consciousness to information processing procedures, and the assimilation of reasoning to algorithmic computation ("running a program"). This idea of the "artificial person" can be traced to the work of Thomas Hobbes.

This request seems to answer the question: "What is consciousness (or intelligence)?" 'Hard' AI thus replaced a techno-scientific mimetic approach to the question of man, of human subjectivity. This approach consists of simulation and reconstruction.

As artificial reconstruction relies on given regularities (structures), the technique seeks to discover and reproduce these regularities by other means, assuming that the set of regularities constitutes the essence of the thing or that the thing can be broken down into regular structures. We note an arbitrary but familiar distinction between the canonical (essential) properties of the thing and the "idiosyncratic" (contingent) and "complementary" properties. It is the familiar scheme of logic, the hierarchy of properties into properties that are determinate (and determinate), constituting the timeless essence of the

thing, Aristotle's *what is, and* properties that are indeterminate (and variable) and are reduced to illusions or epiphenomena. We see, then, in the program of 'Hard' AI, a new form of the old metaphysics of *substance*, of being as being determined.

However, the fact that we use, transform, and construct an object does not mean that we know *what the* thing itself is. On the contrary, it means that we relate to it and establish a functional relationship with it within the social-historical field of significations that signifies it as a tool and that signifies us as users.

Cornelius Castoriadis defined the social-historical field as follows: "*The social-historical is the anonymous collective, the impersonal-human element that fills every given social formation but which also encompasses it, setting each society amid others, inscribing them all within a continuity in which those who are no longer, those who are elsewhere, and even those yet to be born are in a certain sense present.*" [The Imaginary Institution of Society: 184]

I can use the keyboard without knowing how it works. And if I build a keyboard, I can understand how it ought to behave and work without knowing what electrical signals it manipulates. An object becomes a tool according to a rule, and the rule realizes a purpose stated in an intention. An object becomes a tool by being associated with subjectivity, a relation possible within the social-historical field that coheres to the present in question as the magma of all relations and potential associations.

When this "object" is the human mind, we are faced with the problem of objectifying subjectivity. The implicit claim of 'Hard' AI is that the entire human psyche, the psychic magma of the unconscious, preconscious, and conscious (to take Freud's first locus) or of the Id, Superego, and Ego (to take the second locus), can be exhaustively reduced to a set of finite logical operations, an algorithmic table of binary reactions recorded as points 0 and 1. Such, after

all, is the program of a computer, a Turing machine. The execution of a particular path of choices between yes/no, and 1/0, utilizing electrical signals, which gives, according to given instructions, a specific result (output) according to a particular input. Is this an exhaustive description of the human being? Is it enough to have the appropriate input and the appropriate program to have the output that I am currently typing these words, which I learned but did not invent, nor did I find free, while wrestling with a problem, which is not private, nor is it the first time it is being discussed, in search of a daily and permanent meaning?

Although the chimera of AI is placed within the horizon of the feasible by theorists such as Stephen Hawking, who stated in 2014 that the "development of full AI may spell the end of humanity", I believe that its metaphysical and epistemological presuppositions are flimsy.

In the following article, I will focus on a particular application of AI for online discussions with human users, ChatGPT, to show the implications of online digital technology in the social-historical modalities of human existence. ChatGPT is an application that combines AI with the Internet, the possibilities of Machine correspondence with the potentialities of human telecommunications.

In the following sections, I will briefly address the particularities of the ChatGPT application and finally explore the meaning of telepresence. But who inhabits this world? Is it a world dominated by human users or by algorithmic machines? The public launch of ChatGPT in late 2022 has created a worldwide sensation that seems to question our control over communication.

### The challenge of talking to ChatGPT

In the last weeks of 2022, the company OpenAI released a free online demo of the machine, described as being able to "answer persistent questions, admit mistakes, challenge incorrect assumptions, and reject inappropriate requests."

Obviously, we are dealing with an innovation that will lead to more sophisticated models, even more human, that will further bridge the gap between the impression given by a human and artificial intelligence. In a Matrix-type dystopia, we can imagine various dystopian alternative scenarios, up to the complete enslavement of humanity to the machine. If we check ourselves a little, we may find that such fantasies contain doses of pleasure, like any fantasy of future dangers. At the same time, we are safe, or at least that is what the success of Matrix-type dystopias shows at the level of the social imaginary. We can wonder more realistically about the consequences of this particular model, which may render the educational system of written assignments obsolete if students resort to ChatGPT for tasks.

But we have already gone deep into the human. We are already imagining. We already find pleasure or curiosity, or stimulation in our imagination. Already the use of the machine activates all our creative imagination that generates visions related to the use and mobilizes emotional reactions, of surprise at least, in the user. The creative imagination is based on the primary cognitive faculty of projecting ourselves into the world, which manifests itself very simply in anthropomorphism. Two dots and a curve are enough to see a face on a surface. The ability to discover personal will and self-activity in the stars and in the geophysical environment is the foundation of cultural structures of indeterminate depth. So it is logical to confuse the machine with a face; it is an

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extension and condensation of the capacity to hypostatize the abstract and personify the abstract. This is an effect of digital immersion.

Immersion leads us "beyond the screen", where the interaction between the subject and the environment is not experienced as external, between two independent entities, but as internal, as belonging to a shared environment under a common configuration (Augé, 1995; Zhai, 1998; Borgmann, 1999; Brey, 2003; Coyne, 2005). However, our ability to connect with the digital world does not mean that AI has cognitive abilities.

John R. Searle developed some serious arguments against the equation of intelligence with computation and the interpretation of the mind as a digital computer.

In 1990 Searle formulated the "Chinese Room Argument": he assumed a perfect computer that simulates knowing Chinese by running an algorithmic program that provides the correct response to each query in Chinese. We input Chinese phrases and receive, as output, correct Chinese responses. Let us imagine, says the American, that he, a human subjectivity, is in a closed room with two lockers and an English version of the same program. Logically, he could also receive Chinese phrases and give correct Chinese responses by carrying out the program's suggestions. Each observer, its responses are as correct as the computer's. But here, an additional datum is introduced. He does *not know Chinese*. He is sure he *doesn't know Chinese*. He does *not understand the meaning of his responses*. By implication, it is wrong to conclude that a digital computer *understands* the meaning of what he says simply because he is running the program of uttering the words:

*"The formal syntax of the program does not in itself ensure the presence of mental contents [...] syntax is not the same as, nor is it in itself sufficient for, semantics."* (Searle, 1990)

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So, it has already been shown that we *cannot* reduce meaning to syntactic structure; we cannot establish that a machine thinks in terms of its responses. Subjectivity resists objectification because of its access to a world of *meanings*.

Talking to God is more absurd than talking to an artificial intelligence.

But the AI itself is not a subject. It is an artefact built to respond by mimicking patterns of behavior. It draws behavioral patterns from vast feedback databases provided by the communicative actions of actual human subjects, the users. So our company is fooling us, as only humans can fool humans for exclusively human purposes.

The use of the demo is not free. The accuracy and learning re-learning of the machine must be based on human feedback. It requires the user's personal data, the mapping and recording their behavior and, more importantly, their active interaction with the machine. These provide the raw material for machine learning. On a massive scale, they create what Shoshana Zuboff in her book *The Age of Surveillance Capitalism* calls 'behavioral surplus' (Zuboff 2019), which, as early as 2002, Google's search engine algorithms have been using to create the databases they process for surveillance, personalization and targeting of each user with advertising products. This digital surveillance economy that drives what Zuboff calls "surveillance capitalism" (or surveillance capitalism) requires the cooperation of users who become products and raw materials and also means of refining and developing the behavioral surveillance mechanism to produce algorithms to predict behavior statistically (Zuboff 2019). This is how machines learn what we teach them without our awareness.

It seems strange that man is alienated from the machine that creates him; it is an eminently human characteristic

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that society is alienated from its institutions. Typically, humans should understand how the machines they create work, much more than their pets, which are autonomous creatures, do. And yet, instituted political heteronomy makes technoscience (Castoriadis 1997: 346) the exclusive domain of closed technoscientific circles and tightly sealed, through hierarchy and exclusion, institutions that create a climate of mystification around technologies. Google does not disclose information about the algorithms it uses to monitor and record the users of its machines. Still, it does not cease to produce misinformation about their purposes and function. It creates impressions. I think the key phrase is "make it look that way". And therein lies the great danger.

Human subjects are prone to impressions. Not because human cognition is tabula rasa but because the human imagination spontaneously invests every new impression with emotional and conceptual load, assimilating, metabolizing and interpreting the real psychically. Every message addressed to us creates the impression of a speaking subject because we are speaking subjects.

But I argue that while AI can write poetry, it cannot read poetry.

Let's make an imaginary case. Suppose an alien spy copies ChatGPT's Software and algorithmic model precisely and transfers it to their planet, where they have their own internet, in a language all their own, completely non-human, with radically different meanings, which the alien converts into raw data for the machine. Will the machine be able to function as if it were an alien? Logically, yes. Will anyone understand the difference? Certainly not. The first impression everyone will retain is their own impression.

But therein lies the huge problem. The machine belongs to someone. The data it processes belongs to the management of some institutions. In our case, a private

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company within the digital capitalist oligarchy. The technological system is necessarily embedded, supported and interacts with the dominant political and economic institutions. They also define the finality of techno-scientific constructions.

The machine is designed to mislead and misinform because the criterion for the success of artificial intelligence is to conceal from the user the knowledge that it is artificial intelligence. Misleading means the ability to create the impression of individual purposes that mask the general purpose, which is to extract behavioral data to manipulate the population, to turn interpersonal communication into capital. So much so that it creates informational capital even to create machines to simulate faces, to simulate interpersonal communication. Enormous possibilities of surveillance and manipulation embedded in the capitalist system have as their driving contradiction the transformation of subjects into objective values and reification. The opposite dynamic, the transformation of objects into subjective simulations, is latent in every system's metabolism towards individualized heteronomy.

Individualized heteronomy is inherent in the system's functioning as it shifts from mass production to individualized consumption. But it is also inscribed in the institutions of political representation, constituting an impersonal bureaucratic system of governance where the technocratic mechanics of power already mediates human communication. Moreover, the pseudo-public personalized digital space of the corporate internet exacerbates the user's alienation from the institutions of governance.

The mechanisms of manipulation become more effective as they become more invisible, while the mechanisms of authority seek maximum interaction. Therefore, the issue raised is critical.

A further question, beyond whether we can distinguish the machine from the human, is whether we will prefer the machine.

This helps us understand what kind of events make up cyberspace. If we take it as a semantic space, then the physical events of the material infrastructure are meaningless, but neither are the Software codes. Instead, what is meaningful are the narratives exchanged within and across cyberspace between active subjects - users. Therefore, cyberspace consists of historical events that are meaningful only to users.

Historicity is external to the digital electronic system but immanent to the real subject – the user. Time is transformed and multiplied in the digital-only to the extent that it is permeated by active human interaction.

There is no objectivity without a plurality of subjects - but there cannot be a plurality of subjects without the social-historical that makes them subjects: temporality can only be intersubjective/intersubjective, that is, social-historical since there is no plurality except as a subset of society, not as an initial state. So historicity and meaning are external to the digital electronic system because narrativity is not algorithmic. Why? Because human temporality is not an algorithmic state.

### **What is telepresence?**

In the early 1990s, when I was at school, I corresponded with a girl in the traditional way. At some point, our correspondence was interrupted. One of the letters had never reached its destination. It was an unexpected but not-so-rare event that interrupted our disembodied, long-distance communication. It was a fault of the communication system, the interaction platform,

i.e. the post office, and a disadvantage of the slow temporality of transmission, the physical transfer of the message through a succession of stations, somewhere in time and route. The message, the letter, was lost.

The absence of a response was not a non-response since the original message was never received. It was an involuntary non-response, not a non-response, not a voluntary statement of refusal. The result, the communication breakdown, was an accident, not the result of the will of any of the correspondents. The silence, since it contained no intention, no clear meaning, was ambiguous and caused a gradual anxiety that spread and watered down time according to the length of the expectation of a response - according to the distance, an expectation that might last months before it was denied.

The slow timing of communication and the ambiguity of the reception of the message also characterized the different quality of the correspondence. The handwritten address to the absent person was in itself a slow process; the careful writing of the letter, the necessary condensation of many events and feelings into a few lines, the condensation of days and months of absence into words, involved, along with the active activity of the sender, the potential presence of the absent person, as a ghost of the recipient, guiding every step of the letter's dispatch. He was present during the writing, he was present during the proofreading, and he was present during the journey to the post office. The letter's disappearance in the post box already contained a moment of satisfaction, an imaginary meeting of the absent, an imaginary foreshadowing of the thrill of the coming moment when the letter would arrive and the reply would be on its way, a foretaste of fulfilment. The small ritual of writing the letter was in itself a gesture of bridging the distance, an address to the absent, which was reduplicated and multiplied by the unique physical

presence of the letter and its personal content. They were small gestures that made up for the system's errors, just as the letter itself was inadequate when it asked to make up for the presence of the absent.

The new interaction platforms with disembodied digital telecommunications have fixed the system bug. It is immediate and instantaneous, and the message is not a physical entity but a digital code that can be reproduced as is without residue. The absence of a reply can only be intentional, indicating the recipient's refusal to communicate - a statement of non-response. Digital online communication does not include waiting times, only sending times, delivery times, and response times, which are not separated but create a consecutive time unit - unless the recipient, the absent one, does not respond.

Then a digital paradox is created. When the absent person does not answer, he becomes genuinely absent. It is a feature of digital communication that every user is always potentially present. In social networks, digital profiles and avatars are always available, that is, always accessible.

Telepresence is, by definition, the essence of telecommunication. Every form of telecommunication, from the telephone to video calling on Skype or Facebook, is based on this imaginary metonymy of the face, which makes a person's voice and image a substitute for their physical presence.

As we live in a world of the symbolic order and in a society of exhaustive classification, a person's face is interchangeable with their footprint, especially in interaction platforms where the digital footprint replaces the body. Thus, non-response replaces silence in a world where telepresence is taken for granted and a condition of participation. Because the interaction platform, the digital communication network, offers constant accessibility in exchange for continuous participation. It

provides the platform in exchange for the content since it remains inactive without active user interaction; it provides the permanent presence, the digital elimination of distance, in exchange for the users, whose data become material to be exploited.

With the technology of Smartphones, which merged the telephone call with digital social networks, the user is always online, always accessible and digitally present. The cyberspace of social networks is constituted as a virtual, permanent here-and-now, with no room for the elsewhere-and-then, which dissolve, like illusions, in the pure virtual space of the Internet, where everything is adjacent, and everything is connected.

The telepresence of users creates the virtual place; it is a virtual place of digital communication.

Therefore, telepresence is an immanent component of cyberspace; accessibility is an element of its mode of existence, the digital object and the digital pseudo-subject (digital trace of the subject) are by definition related to the user's visibility and attention, whose fields and modes are nevertheless reconfigured according to the terms of digital communication. The screen, the surface of interaction, replaces the depth of the physical encounter; as the profile flattens the face, the screen draws attention, absorbs the living gaze, and disperses it over a surface of signs.

Bernhard Waldenfels observes: "*Electronic displays are the mechanisms of attention and contribute to the constitution of reality, not merely to the transmission of meaning.*" (2011: 64)

Telepresence is not only continuous and uninterrupted; it is potentially immortal. Digital profiles do not age; they do not undergo physical temporality, they are not thrown in and out of the world; they are only in the virtual place of which they are elements. On the digital platform, their

physical presence does not correspond to the significance of their presence in cyberspace. In the physical world, they exist as light signals, combinations of bits, while in cyberspace they exist as symbols, combinations of meanings. In digital communication, no gesture underpins or completes the message; the whole message is contained in the symbol. The absence of physicality in digital communication is more pronounced than its absence in merely disembodied communication through letters (correspondence), because there is an immediacy to the instantaneous interaction that substitutes, without replacing, physical presence. The annihilation of the transmission time embedded in the old forms of disembodied communication has made modern telecommunication as immediate as actual physical interaction. However, the absence of corporeality completely changes communication limits, risks and scope. There is an emptiness, an immanent absence at the heart of digital perpetual presence, the lack of physical, embodied subjectivity.

But the relation of consciousness to the body is not univocal and consciousness does not reside in the present of the body. The body is not merely an object of consciousness, it is a magma of bodily meanings, inextricably intertwined with psychic meanings, but not in symmetrical correspondence or equivalence with them. The embodied soul, the subject, the individual human being, is in itself a magma of bodily, psychic and social meanings, singular representational ruse.

There is a somatic imagination, similar to the animal imagination, as the body creates the sensations, transforming external shocks into images. The bodily imagination is constitutive of the sensuality of the world and of a sense of temporality, of here-and-now-ness. There is a presence of the body and an internal representation of the body, which is not transparent, as

we often cannot locate the bodily source of a pain, but only the pain - but it is constant.

This deep field of totality is not broken by telepresence. Still, an immeasurable distance is established between consciousness and physicality, with the latter retreating beyond the gaze without ceasing to interact with the psyche.

As far as intersubjectivity is concerned, a new unbridgeable gap opens up between the body of the subject and the body of the other, which withdraws beyond the field of communication.

Waldenfels notes: "*The problem, in fact, lies not in telepresence, which increases our own possibilities to the level where distance is abolished, but in tele-absence, which withdraws from its own access. [...] Here the technical means are confronted with the limit of representationality, without being able to represent the limit itself...*" (2009: 110)

And, as Norm Friesen explains, what lies beyond the limit of representation is embodied, physical presence, what we might call self-facing presence. The body as "*simultaneous self-reference and self-withdrawal*", (Friesen 2014) as a complex of "*active and passive meanings*", voluntary and involuntary gestures and expressions, movements with intention, reflexive movements and bodily functions, cannot be captured and depicted by technologies of telepresence, which "*refract, distort, delay and disperse*" the significations of self-facing presence. While abolishing distance in communication, telepresence presupposes the withdrawal of corporeality concerning the other (which distance imposes anyway) and the user himself, whose consciousness is submerged in the shallow surface of the screen. At the same time, his attention is compressed into the mediated field of symbols. As a result, a new form of alienation occurs between the subject and his image, to

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the extent that his image becomes autonomous from his presence and represents the personal totality that it fragments.

In cyberspace, the digital trace of the subject is constantly in the here-and-now; this is the constant telepresence. The pseudo-subject of digital communication is constantly accessible. At the same time, the physical body, the embodied subject, and the real subjectivity are constantly in the Here-and-Now - the constant telepresence. The real subject of digital communication is permanently inaccessible. Telepresence and telepresence are the two intertwined dimensions of digital representation, not in a relation of opposition but in a relation of mutual implication. Disembodied digital communication leaves no room for silence; silence is not complemented by physical presence and all the subtle expressions and gestures with which it fills it, while it has no room for touch, which is expressed without words. But it does have room for the voice and the letter. It reproduces all the limitations of the written word in the immediate temporal duration of oral communication, without the richness of indivisible significations of corporeality nor the danger of face-to-face communication.

It is thus offered for ad hominem attacks, for trolling, for anonymous social outcry, for spreading fake news and extreme intolerant views, and for reproducing slogans. It lends itself to the audacity of timidity, although disembodiment does not eliminate the emotional and psychological risks. Various studies link the use of digital networks with cases of depression and alienation, and related syndromes such as Internet gaming disorder are already included in clinical textbooks.

In contemporary political discourse, and especially in the English-speaking world, the debate between individualists and communitarians is moving into the new field of e-

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governance and digital democracy. Cornelius Castoriadis observed as early as the 1970s that the latest information technology available makes it possible to provide the population with the necessary information to make decisions based on knowledge (1997: 301).

The digital world constitutes a virtual reality not as a reflection, but as a recreation of the social-historical world, a new field of political and economic competition, in open interaction with the wider social environment.

The emergence of the Internet constitutes a social-historical intersection in the social, epistemological and ontological field, an ontological revolution. (Schismenos, 2023: 403-409) It accompanies the constitution of a new level of reality within the social-historical field, which has the property of being autonomous in a representational sense.

A reminder is necessary. As mentioned before, the term "ontology", which has been part of the philosophical vocabulary for centuries, takes on a new meaning in the context of information theory. Tom Gruber in the early 1990s introduced the idea of 'ontology' in information theory:

*"In the context of knowledge sharing, I use the term ontology as the formulation of a conceptualization. That is, an ontology is a description (like a formal formatting of a program) of the concepts and relationships that can exist for an agent/actor or a community of agents/actors."* (Gruber 1993).

Therefore, an ontology in this context defines a relationship of good information ordering concerning a list of formal commands that regulate the value of signs and set common data collection sites (data sets) to information. It is a formal representation of data to organize information and describe a cognitive domain.

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An ontology, as a code for exchanging and assembling data into standard information sets, defines a domain and determines the value of its constituent elements. It defines ways of interpreting and algorithmically classifying them into information, i.e. sequences of signs with practical meaning. (Gruber 1995)

The fact that the informational ontology is consistent but not complete shows, on the one hand, that it is not simply limited to classificatory classes but is constituted as linguistic systems whose elements are not merely formal but convey knowledge through the exchange of contents. It goes beyond mere taxonomy, conveying evaluations of objects by reducing them to a common interpretation. In real life, a word can have many significations and describe many objects or, on the other hand, an object can be given many names. There is a distance between the sign and the object, a vague field of imaginary labelling.

In computer language, the sign is the object, it does not represent the object, so constructed ontologies are constituted as systems of signs, the interpretation of which is their architecture, their assembly into conceptual sets whose elemental value/hierarchy is prescribed. Unlike an ontology of the world, information ontologies do not refer to the object, nor do they constitute a representation of the object, but they include an object as a representation; they create their object directly through the association of information since their object is information. By defining the exchange/equivalence value of information items, each ontology of an information domain defines how to evaluate items based on a prescribed and predetermined use value, an externally (developer) given purpose. Here the ultimate operant schema is the schema of (instrumental) finality.

Artificial information ontologies are finite structures within the more comprehensive social-historical matrix, where the meaning and significance of data emerge in the

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dimension where the exchange of information does not just constitute a common territory, but includes a world of meaning in open interaction with the public field of social imaginary meanings, which it reproduces, disperses and transforms.

So the ultimate deciding factor is still the social imaginary and the political imagination of digital communities and users, as it seems to have all been in the human world. In their last book, *The Dawn of Everything*, anthropologists David Graeber and David Wengrow illuminate the notion of self-determination from the very dawn of humanity. They argue:

*[...] the intricate webs of cultural difference that came to characterize human societies after the end of the last Ice Age must surely have involved a degree of political introspection.* (Graeber & Wengrow 2021 :212)

We might expect the same, if not more, from the intricate webs of digital communities.

The digital world opens up two opposing perspectives. On the one hand, the Internet offers the possibility of a new democratic humanism characterized by horizontality, free exchange and the commons. But, on the other hand, it provides the possibility of a new semi-inclusive anti-humanism equally if the emphasis is on the development of capital, the expansion of neoliberalism, the registration of the population, the de-personalization of communication, social isolation and control. The difference is political and lies in the meaning of digital communication as a communicative act.

### Software nightmares

On June 22<sup>nd</sup> 2024, the "Delphic Dialogues" took place in Greece, with prominent speakers such as L.

Floridi and K. Hayles, under the auspices of the President of the Republic and title: "Democracy and Culture in the Age of the Post-Human" Are we in the age of the Post-Human? Is the Post-Human the domain of concern for democracy and culture? And what does Post-Human mean?

Watching the public debate, we understand that "Post-Human" is part of the enthusiasm surrounding AI applications. Dystopian predictions and utopian visions fill halls and screens. However, it seems that the public debate is conducted as a sharp confrontation between technophobia and techno-literacy with hyperbole on both sides, such as the enslavement of humans by machines or the complete liberation of humans through machines.

*"The time will come when machines will have real dominion over the world,"* Butler warned humanity, as we mentioned.

Butler's warning was neither heeded, nor forgotten, as Frank Herbert incorporated it into his iconic science fiction novel, *Dune* [1965], the chronology of which involves a Butlerian Jihad, a mass human uprising against AI that results in the final ban on thinking machines.

Some decades later, George Dyson brought Butler's warning back into the scientific discourse with his book *Darwin Among the Machines: The Evolution of Global Intelligence* (1998). There Dyson argued that the Internet, just a few years before had been made available to the global audience of users is already a global collective artificial intelligence.

*"[We] have looked forward to the emergence of a higher intelligence above or a greater intelligence beyond. [...] The evolution of language is a central mechanism through which life and intelligence unfold. If all goes well, our children will be even more closely interconnected in the myriad [digital] ganglia embedded in their lives while remaining members of humanity. In the distant future, they*

*may see us as minors and wonder how, without symbiosis with telepathic machines, we were able to communicate or even think."* [Dyson, 1998: 228]

The reality that Dyson envisioned is, in some ways, similar to our reality a few decades later. The digital revolution has been an epistemological and ontological revolution that radically changes the relationship of human subjects to the world and to each other. And indeed, as generations born before the 21st century grow older, the experiential bridge that connects us to the pre-digital, analog world seems to be receding into the background of history. This applies not only to the portion of the population that uses digital applications and the Internet but to every living human subject.

Heidegger in the mid-20th century protested that typing on a typewriter degrades the written word as it homogenizes the handwriting, but his protest also declared the irreversibility of the dominance of the typewriter:

*"At the time of the first dominance of the typewriter, a letter written on this machine still meant a violation of good manners. Today a handwritten letter is something antiquated and undesirable; it disrupts rapid reading. Mechanical writing deprives the hand of its place in the realm of the written word and reduces the word to a means of communication. Moreover, mechanical writing provides that "advantage" that it conceals the handwriting and thus the character. The typewriter makes everyone look the same."* (Heidegger, Parmenides, 1943)

We complain that telecommunication eliminates personality and that telepresence conceals the living body. Knowing that Heidegger also typed and, because of this, we read them today, we too, from a distance, denounce distance.

But are we serving some non-human, artificial intelligence that develops independently and self-sufficiently when we connect to the Internet? Is there some technological superhuman purpose defined by digital technology itself?

Both assessments seem to be contradicted, and yet they dominate as social trends. Castoriadis stresses that the social imaginary is a mixture of institutionalized significations that give meaning to reality based on symbolic systems and representations that evoke some feeling and mobilize some intention.

AI as a mechanical system has no interiority, i.e. neither subjectivity, will, and feeling, hence neither intentionality nor autonomy of purpose. There is a problem with AI called the "black box problem". There is no logical, causal connection but generating answers by randomly sampling words based partly on probability. Their "language" consists of numbers corresponding to tokens and unknown intermediate matching steps. At the beginning and end, the question and answer serve purposes posed by human subjects and have social meaning.

But who decides the ultimate purposes of the system?

Based on the foregoing, could we distinguish the real transformations that AI brings from the delusional dystopias of Science Fiction?

### **On living beings and thinking machines**

The digital world is certainly not limited to the cyberspace of the Internet but surrounds us in all aspects of private and It is on our bodies, in our smartphones, and our other "smart" devices such as biometric watches, etc. In all dimensions of our outdoor space, as a screen, device, connected object, surveillance camera, drone, cleaning robot, electronic car brain, etc. It is found in our

interpersonal and social relations as a medium, language, field of coexistence and interface, platform for reconstruction and advertising of the self, digital social network of conversation, and the device of constant availability, way of regulating work processes of production, way of public services, way of monitoring, etc. It is found in social functions and institutions of governance as a state application, a place of speculation, a mode of decentralized and uncontrolled economic transactions, a field of news dissemination and propaganda formation, a field of teleworking and telecontrol, a mode of teleconsumption, a place of digital abuse and exploitation, etc.

Professor Luciano Floridi, describes the digital revolution as an epistemological Fourth Revolution, as a next step after the three previous ones, which were Copernican, our disconnection from the center of the universe, Darwinian, our disconnection from the center of nature, Freudian, the disconnection of our rational consciousness from the center of the will. Similarly, he observes that the expansion of cyberspace is changing our mode of self-understanding as we become "information organisms."

*"Semantic information is well-formed, meaningful, and truthful data; knowledge is relevant semantic information properly accounted for; humans are the only known semantic engines and conscious inforgs (informational organisms) in the universe who can develop a growing knowledge of reality; and reality is the totality of information (notice the crucial absence of 'semantic')."*  
[The Philosophy of Information: Preface]

Let us note the removal of the barrier between the natural and the artificial which, for Floridi, is what the emergence of the digital world in the social-historical field means. It will serve us below when we contrast the artificial with the living. Removal of the separation between natural and artificial beings is better defined by the neologism

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"biодigital", as the term "informational organism" blurs the fact that the living being, in general, is an information creator and shaper of the environment in the world, not just the human being.

Consequently, the digital world also reaches within us, as an inevitable framing of central social functions and as an enactment of new biодigital ways of life and new conceptual orientations of the contemporary social imaginary. It retroactively affects our inner psychic temporality - conscious and unconscious.

And "AI" is not some futuristic horror, like the android robots and the Replicas of *Blade Runner*, but the operating software that organizes and regulates the applications of the digital.

Let us quote the simple definition of AI provided by Wikipedia:

*"Artificial intelligence (AI), in the broadest sense, is the intelligence displayed by machines, in particular computer systems. It is a field of research in computer science that develops and studies methods and software that enable machines to perceive their environment and use learning and intelligence to take actions that maximize the chances of achieving specified goals."*

This definition refers to the broad area of "Soft AI" which has colonized our social reality, besides marking a retreat from the project of "Hard AI" or AGI, the creation of autonomous Thinking Machines. Below we will examine the applications of the former to clarify the possibilities of the latter.

The digital revolution is an ontological revolution and as such creates new fields of existence that bridge the dimensions of presence and absence, with a virtual symbolic mediation. That is, a dual world of luminous electrical signals that are decoded only by the

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corresponding artificial system/symbolic pixels that are meaningful only to the intertwined human subjects.

In the following chapters, we will focus on a specific area of this territory, namely the association of the human subject with digital "artificial intelligence".

A simple search on Google Cloud informs me briefly about the AI applications:

*"Applications of artificial intelligence (AI):*

*Natural Language Processing (NLP): NLP allows computers to understand and produce human language. This technology is used in various applications such as machine translation, spam filtering, and sentiment analysis.*

*Computer vision: Computer vision allows computers to recognize and interpret visual content. This technology is used in a variety of applications, such as self-driving cars, facial recognition, and object detection.*

*Machine learning (ML): ML allows computers to learn from data and improve their performance over time. This technology is used in a variety of applications such as predictive analytics, fraud detection, and recommender systems.*

*Robotics: Robotics is the branch of AI that deals with the design, construction, and operation of robots. Robots are used in a variety of applications such as manufacturing, healthcare, and space exploration.*

*Artificial intelligence in business: [Business Intelligence - BI]: AI is playing an increasingly important role in business intelligence (BI). AI-powered BI tools can help businesses collect, analyze, and visualize data more effectively and efficiently. This can lead to improved decision-making, increased productivity, and reduced costs:*

*Data collection: collecting data from various sources, including structured data (e.g. databases) and*

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*unstructured data (e.g. text documents, images, and videos).*

*Data analysis: analyzing data and identifying patterns, trends, and relationships.*

*Data visualization: AI can help create visualizations that make it easier to understand data.*

*Decision-making: the insights and recommendations generated by AI models can help in making data-driven decisions for businesses.*

*Artificial Intelligence in Healthcare:*

*Diagnosis of diseases: AI can be used to analyze patient data and identify patterns that may indicate a disease. This can help doctors diagnose diseases earlier and more accurately.*

*Development of treatments: By analyzing large patient datasets, AI can identify new patterns and relationships that can be used to develop new drugs and treatments.*

*Personalized care: By analyzing a patient's data, AI can help doctors develop treatment plans that are tailored to the patient's specific needs.*

*Artificial intelligence in education:*

*Personalized learning: AI can create personalized learning experiences for students. By monitoring each student's progress, AI can identify areas where the student needs additional support and provide targeted instruction.*

*Developed student engagement: AI can develop student engagement by providing interactive and engaging learning experiences. For example, AI applications can provide students with real-time feedback and support.*

*Automated administrative tasks: Administrative tasks, such as grading papers and lesson planning, can be assisted by AI models, which will help free up teachers' time to focus on teaching.*

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*Artificial intelligence in finance: AI can help financial services institutions in five general areas: personalizing services and products, creating opportunities, managing risk and fraud, transparency and compliance, automating operations, and reducing costs.*

*Artificial intelligence in architecture: Artificial intelligence can help create visualizations that make it easier to understand the data.*

*Additional applications of artificial intelligence*

*Retail trade: AI is used to personalize the shopping experience, recommend products, and manage inventory.*

*Transportation: Artificial intelligence is being used to develop self-driving cars and improve traffic management*

*Energy: AI is used to improve energy efficiency and forecast energy demand*

*Governance: AI is used for public safety, to detect crime, and provide services to citizens."*

Let us note that AI applications touch all spheres of social life and could be broadly categorized into applications related to research, design, and production; applications related to entertainment, art, and communication; applications related to promotion, networking, and advertising; applications related to control, governance, and classification.

Next, let us note that some functions of AI involve what we would consider exclusively human responsibilities such as "Data Analysis", "Disease Diagnosis", "Treatment Development" and, most importantly, "Decision Making". The specter of threat looms before us at this point. But it is not the chimera of the replacement of man by the digital machine, but something worse, because it is more likely: the replacement of man by the digital machine. And finally, we recognize that if this happens, it will be the responsibility of the people and the domination of

instrumental rationality that the digital machine realizes, i.e. the irrational dismissal of a pseudo-rational technocratic imaginary. We will explore the conditions of this possibility as we study the new conditions of digital reality associated with AI.

Along the way, to maintain a coherent thread, we will focus on the AI applications that we encounter in our daily lives, rather than those used by engineers in digital programming itself or hybrid industrial production. AI programs that implement this correlation at the interactive level through response, i.e. chatbots, chat applications, as well as AI applications that produce private digital artifacts such as images, words, music, and artificial digital faces. They are the applications that are made available to the general public as private digital tools and games and constitute the public, visible to all, face of AI.

In the human condition, both the subject and the object of perception and imaginary representation are creations of the social-historical. They originate as primary imaginative determinations of identity. We speak then of socialized subjectivity and social-historical objectivity of human existence. Man exists in society and individuality is a historical creation of a particular social institution, more or less identical with the Euro-Western tradition.

Therefore, we can find in each object a stratification of meanings, a hierarchy of significations produced by its association with the other objects and object systems of the social-historical field. The functional value of an object is intertwined with its symbolic interpretation and furthermore with its successive historical reinterpretations over the course of time. Equally, we can assume in each subject a layering of representations corresponding to given significations and symbolisms and an imaginative capacity for interpretation but also a boundary-preserving coherence of the self in and through

these representations, from the unconscious to the social surface of formal interactions. Of course, this maintenance of coherence often breaks down from the perspective of the subject, as the image of the self is also an imaginary object of transformations, but it is held together from the perspective of society, which identifies the individual as a living political unit of responsibility and rights.

But the traditional mechanistic separation into subject and object of perception, as separate and independent bodies in an infinite empty space, has already collapsed since the beginning of the 20th century. Walter Benjamin in his essay "Surrealism" [Die literarische Welt, February 1929] claims that the surrealist movement in the arts manifests a new, dynamic view of human nature corresponding to the new dynamic conception of matter as a two-particle/particle wave in electromagnetic theory. Benjamin calls for replacing the traditional conception of the human subject as a substance with the categories of image space (Bildraum) and body space (Leibraum) to characterize the event field of reality and the wave flow of social relations as "innervation."

The concept of 'innervation' aspires to describe the multiform and multilayered relationships between the individuals of a collective, which is understood as a 'body space' that is formed and exists within an 'image space'. In a different terminology, we would say that sociability is formed as an intersubjective spatiality corresponding to the imaginary representation of the social body. "Innervation" defines a self-developing spatiality of dynamic social interrelationships in constant transformation, i.e. a collective temporality. Within the active nodes of this dynamic movement that reconstitutes its sites, we must locate living human subjectivity, living individuals, even if we find that the overall movement transcends individual synapses and

that the very distinction between the regions of the exterior and the interior develops in parallel with the 'innervation'.

However, the concept of "innervation" is proving to be quite fruitful in the field of global digital networking on which the AI program is based. If we imagine the digital nodes of the Internet as nerves, the HyperText Transfer Protocol (HTTP) as a classification of neurons, the global network of fiber optic cables carrying electrical signals as neurons, and user interactions as synapses, we can imagine the Internet as a global digital brain. Should we include in our analogy the non-public, hidden layers of the Internet, the Deep Web, and the Dark Web, we can imagine both a preconscious and an unconscious layer accessible only with specific codes - symbolic keys.

Nevertheless, our metaphor is poor, since this global "brain" is nothing more than digital reproduction of everyday linguistic acts by real humans, the depth of which is only partially and fragmentarily recorded in the digital world. The subject thus seems to resist, as it is the active temporality in time in general, the creative being-in-itself on which the social-historical world is based.

Artificial "intelligence" aspires to change this, creating autonomous nodes for the production of linguistic acts and communicative images without the necessary mediation of human subjects - only, as we shall see, at the beginning and end of the system, as designers, builders and users of the digital tool. However, the intermediate stages between the designer's formulation of a request and the machine's final response, the stages of sorting through the data, classifying, interpreting, deciding, and taking corresponding action, which traditionally involved human subjects, can now be entirely automated.

The automation of intermediate stages of production seems like the machine taking over vast responsibilities and the loss of human control over the production

process, and so it is, as far as consumers and users, i.e. the general population, are concerned. In truth, human control is retained in the design and final implementation of the machine - as political control over the technology. Politics also frames ethics and this applies to the ethical questions that constrain digital design.

The famous moral dilemma with the train and the two tracks, one of which has five potential victims tied up and one on the other, and where we are asked to choose to send the train on one or the other track, is a fake. No freedom of choice is given, nor a way to avoid the killing, only a choice of grading the killing - the dilemma is already beyond the realm of morality since it removes two important parameters - free choice and the categorical imperative. To be in the position to choose means that you are already a murderer but not that you have chosen murder - you can only choose over one particular form of murder or another. So there is no moral dilemma. The ethical dilemma of murder has already been answered in the previous moment, before you were put in the position to decide. The only thing left to decide on is the number of deaths.

Every object in the social-historical world is lined with layers of meaning, it exists as meaning, beyond its material or non-material existence. In the digital world, the hierarchy of meaning of its layering of significations presents categorical differentiations and ontological gaps.

Let's try to unfold it.

In the outer, first physical layer, belongs the material, the material dimension of the digital world, its necessary root in physical reality, and its inevitable wiring to the wider technological world. In this dimension, AI consists of oxidized silicon devices, the Field Effect Transistor (FET) which controls the flow of current by varying the conductivity of a three-semiconductor channel using an

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electric field. They consist of a source from which the current enters, a drain diode from where the current exits, and an insulated gate whose voltage regulates the conductivity and intensity of the electric field. Control of the physical correlation of voltage to conductivity is applied to the controlled switching of electrical signals encoded in a digital logic language. Naturally, AI neural networks consist of a multitude of such elements interconnected in computational units and computer networks. Here the dominant temporality is the physical temporality, the space-time of solid bodies, electronic signals, and wave energy fields.

The digital, logical layer where the software belongs, i.e. the algorithms that constitute the AI program, is already in the social-historical realm of the human world. It is a mathematical world of logical functions and certain sequences that are the ideality, the linguistic dimension, of the technical world. We are already on the other side of the ontological crack; we are in the realm of being-in-itself. Digital elements have no meaning outside the human world, nor do they refer to human subjects themselves. They are elements of the digital programming language, one-way mappings of electronic signals to mathematical functions.

The software operator engine is the Central Processing Unit of a computer system. AI systems are based on sophisticated and specialized forms of processors, first developed with the adoption of graphics processing units [GPUs] by computer game design. GPUs are flexible and excel at handling parallel tasks, while CPUs (Central Processing Units) are general-purpose processors that handle a wide range of tasks. As GPUs are specialized for handling graphics and computing the details of images, they have proven useful in performing algorithms for clustering and correlating data based on similarity and tabulation.

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After 2017, AI systems started to use neural processing units (NPUs) which are specialized data processing acceleration systems for multi-computer neural networks. NPUs are designed to handle complex mathematical computations among multiple computers embedded in artificial neural networks and accelerate deep learning algorithms. They are multi-core parallel processing systems that rely on recursive cache processing for acceleration.

Algorithms are trained to identify patterns of data, making predictions about appropriate output data according to input data and based on the most prevalent previous matches. There are four types of machine learning algorithms: supervised, semi-supervised, unsupervised, and reinforced.

**Supervised:** Algorithms learn from already classified data [tagged/tagged] to make predictions about the most appropriate classifications of new data.

**Without supervision:** Algorithms analyze unclassified [unlabeled] data to discover patterns and clustering based on similarity, reducing the volume of data to potential correlation structures.

**Reinforcement learning:** Here, algorithms learn from their mistakes through successive trials by interacting with a certain environment to optimize choices.

These are machine learning algorithms that help AI programs optimize their performance by recursively modifying their settings according to standard data patterns. Supervised learning algorithms make use of labeled input data, corresponding to known output data, to memorize the appropriate patterns for producing predictions. Unsupervised learning algorithms operate on unlabeled data, training the program to cluster similar data and discover hidden patterns of association.

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Supervised learning algorithms are based on the logical schemes of linear regression - with recursive modification of classification patterns - and the Decision Trees categorization technique. This logical schema represents a tree structure, in which each node represents a question, the branches represent the possible answers and the leaves of the branches represent possible solutions to the question, i.e. the final categories. A Database contains fields [nodes] corresponding to bundles of categories [branches] that end in categories [leaves]. Thus the data is differentiated according to specific differences.

Unsupervised learning algorithms operate according to the logical schemas of clustering data into discrete sets based on similarity and associating classes of objects based on specific sorting rules. So, data are unified according to pattern similarities.

In reinforcement machine learning the context is provided by game logic, where specific choices are associated with rewards or sanctions. The program is retrospectively trained to quickly choose decisions identified with rewards and avoid decisions identified with sanctions.

In this dimension, the digital AI system is a probabilistic algorithmic performance system with no inherent temporality other than the colloquial sequence of actions. Even the linear regression of informational feedback is a closed pseudo-temporality, as it is an assembly of data elements based on already realized patterns and protocols. Basic algorithmic logic assumes the coherent, measurable, and quantifiable dimension of social-historical time, the mathematical conception of temporality as a logical sequence.

Nevertheless, when we move to the next layer, to the meaningful content of digital objects and the final attributes of the digital system, we are now beyond the symbolic, in the magma of social imaginary meanings. The ultimate purposes and derived meaning of the digital

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system are exclusively about human subjects and only acquire their full meaning according to the social-historical contexts outside the digital system. Here one assumes the poietic-creative, qualitative, and experiential dimensions of social-historical time, the historicity of society through itself.

The most widespread applications of AI, which operate with Large Language Machine Learning Models, implement the basic principles of digital computation according to standard patterns of mappings and responses that do not require the explicit programming of each successive step. This method also creates the notorious "black box" problem concerning the selected decision paths of an AI system, as it is not possible to accurately represent the individual steps leading to the outcome and, consequently, it is not possible to produce accurate results.

One of the causes of the "black box" problem is that AI machines based on machine learning models do not correspond to complete and consistent logical formalizations, as in mathematical models. They correspond to models of propositional logic, as they produce probabilistic answers in a statistical approximation in order to fulfill their functional specifications.

Robert C. Moore [1995, Logic and Representation, Cambridge, England: Cambridge University Press] distinguishes three uses of logic in AI - as a tool for data analysis, as a basis for knowledge representation, and as a programming language. These applications of logic in AI machines span a range of options, depending on the intended outcome, from relatively simple analytical mappings and clustering of data based on similarity parameters to powerful uses such as the representation of cognitive processes, in which algorithmic sequences

become more complex and require a greater degree of consistency.

As the applications of AI concern problems of the social world and the production process involving networks of subjects, the limitations of symbolic logic in the representation of everyday and ordinary complex systems become apparent. Data analysis is based on the method of *per se* abduction, which requires defined patterns of similarity and separation of data as criteria for division.

These defined similarity patterns are based on the precise definition of elements and the possible relationships between them. This becomes visible in the language of symbolic logic, which asks to depict sign relations but after the fact as the primary sign relation itself, i.e. the initial mapping of a signifier to a range of signifieds is an eminently imaginary creation of the social institution. This primordial sign relation institutionalizes both the meaning of the sign as a sign and the meaning of its associations as associations within the schema of mutual symbol/property identification that is at the core of the colloquial ontology.

For the representation of knowledge, symbolic logic defines syntax and semantics that support each other, as syntax defines the informational content of valid "propositional" sequences of symbols while semantics regulates the valid relations between sentences in order for the information -sentences to form a consistent meaning.

Symbolic logic deals with the construction of models with strict correlations of ambiguous correspondence of precisely defined meanings, but the everyday life of social relations is based on imprecise predictions, uncertain decisions, and choices based on habit and routine. Also, the strict collocational correspondences of symbolic logic are inadequate in describing various cognitive capabilities, such as making general inferences from

incomplete data, modifying inferences retrospectively, and adapting behaviors and choices based on expected responses in different contexts.

In programming logic, the logical models applied are non-monotonic, which means that the rules for generating reasoning are not fixed and the correspondences are ambiguous, but are also amenable to "empirical" parameters of recursive modification, based on new data. Let us briefly consider the difference between monotonic and non-monotonic logic, as stated by Professors Th. Panagiotopoulos and G. Anastasakis:

*"In a monotone logic, there is a system of axioms S (the initial knowledge base) and a set of formulas F that are proved (inferred) from S. Adding one or more axioms to S (acquiring new knowledge), the set F grows monotonically.*

*Advantages: Every time a new event is added to S, no new checks are needed. For each new fact that is proved, it is not necessary to record the facts on which its truth is based.*

*Disadvantages: The addition of new axioms may reduce the set of possible conclusions by removing some that prove to be incorrect after addition.*

*Non-arbitrary reasoning is suitable for dealing with some situations that occur frequently in the real world: Situations about which we do not have full knowledge. Situations in which knowledge is generated in the course of performing actions for which we are not sure of their necessity or correctness. Situations in which knowledge is subject to change. Situations in which the system uses assumptions."* [TPanagiotopoulos & Anastasakis, LOGICAL PROGRAMMING, Teaching Notes, Department of Computer Science, University of Piraeus, 2012]

The pioneer in AI logic research was John McCarthy, who published in 1959, an influential article entitled "Programs with common sense", [Proceedings of the Teddington

Conference on the Mechanization of Thought Processes, London: Her Majesty's Stationery Office, 75-91.]

As its title suggests, what McCarthy was looking for was a model of symbolic logic that could be, as far as possible, similar to the common reasoning for solving everyday human problems. In his article, he proposes a number of examples, the first being the question of getting from home to the airport on time. It is a problem with multiple parameters and decisions have to be modified immediately according to new information that emerges based on already given experience frames - e.g. experience of traffic on the roads, possible traffic jams, empirical knowledge of the behavior of others, etc. What seems simple for common sense, which is based on elliptical data and fast empirical decisions requires an endless description of variable elements and patterns that seems impossible in terms of formal logical representation.

Other examples include narrative comprehension, which involves the mental filling in of information omitted as trivial in normal narratives, the ability to understand non-verbal or explicit responses such as facial expressions and gestures, or even the ability to empathize with other subjects in the dialogue process.

But where the gap between formal symbolic logic and common sense seems unbridgeable is in the conception of temporal flow and the transformation of the given that temporal flow carries as an emergence of otherness.

Aristotle, in chapter 9 of his work *On Interpretation*, presents the following argument:

*"I say that a naval battle is necessary whether it happens tomorrow or not, but it is not necessary to happen tomorrow, nor is it necessary that it does not happen, but it is necessary that it either happens or it does not happen tomorrow."*

From this observation, Aristotle deduces the peculiarity of propositions concerning future events, which are neither true nor false, but potentially false and potentially true. But if only what is true now or will be true in the future is possible, then nothing can change the course of things and the Aristotelian distinction of energy/potential loses its meaning, since potential can be reduced exclusively to energy to the extent that it is or will be energy.

A different approach involving multiple unknown futures had already been proposed in the late Middle Ages by the late medieval nominalist philosopher William of Occam (1287-1347), who argued that God does not know future contingencies in the same way that he knows the truths of the present, as final knowledge. In his treatise *Tractatus de praedestinatione et de prescientia dei respectu futurorum contingentium*, written between 1322 and 1324, he stated:

*"So I declare that it is impossible to express clearly how God knows future contingent events. However, we must argue that he does know them contingently."* [F. Copleston, A History of Philosophy, Volume 3: Late Medieval and Renaissance Philosophy: Ockham, Francis Bacon, and the Beginning of the Modern World, Image Books, New York, 1993, 93.]

William of Occam did not deny that God has oversight of the future, but he argued that he knows them as contingent, through divine grace, not as the past or present, which he knows as certain through the intellect. Thus the question of the truth of the things to come is a theological mystery, not a philosophical question, a question incomprehensible to human reason. Although the solution is achieved for the nominalist monk by recourse to Divine grace, the result is an ontological differentiation of the future from the present and the past, since the future is presented under the rite of contingency

as multiple and potential, while the past is presented as unique and finished and the present as complete and active.

In the same year that McCarthy was investigating the limitations of formal logic in AI operations, Arthur Prior (1914-1969) proposed Tense/Temporal Logic as a model for describing temporal transformations.

Prior was impressed by the Aristotelian argument:

*"Propositions which are subject to tense-inflections, such as "I am falling out of a boat", are liable to be true at one time and false at another. Certainly there are unchanging truths, but there are changing truths also, and it is a pity if logic ignores these, and leaves it to existentialists and contemporary informal "dialecticians" to study the more "dynamic" aspects of reality."* [A. Prior, "A Statement of Temporal Realism," in Logic and Reality: Essays on the Legacy of Arthur Prior, Clarendon Press., Oxford, 1996, 46.]

Prior, in his 1959 article 'Thank Goodness That's Over' [A. Prior, "Thank goodness that's over", in Philosophy vol.34 (128), 1959, 12 - 17] distinguished between what he called A-facts and what he called B-facts. A-facts involve relative positions determined by the flow of time, such as historical causal relationships, while B-facts involve unresolved sequential positions, such as 2017 being 17 years later than 2000 and 7 years earlier than 2024. We could therefore say that the A-factors form a continuous A-series and the B-factors form a discontinuous B-series.

Now, suppose I have a headache and when the headache subsides I say 'Thank God it's over'. In B-series terms the expression makes no sense, since no correlation is stated between the headache and the utterance of the sentence, which are merely placed in successive temporal positions.

So, when one utters this sentence, to be true, one must refer to some inner relevance, that is, to the continuous passage of time and not to the external order of events. But relevance presupposes a field of continuity maintenance in the midst of transformation, namely, the flow of time. So the proposition refers to an A-event, which leads Prior to conclude that the A-sequence is also necessary to verify the proposition. Therefore, historicity is also necessary as a meaning operator.

This approach gave rise to the later development of 'Occam's Razor' temporal logic, where time is conceived as a straight line branching from the present point to multiple possible futures, depending on the Decision Trees. Here the notion of 'history' is introduced into temporal logic as an operator of historical relevance.

In Occam's model, time is bifurcated at the present moment, which is thus logically and ontologically loaded with all the history of the past, which brings the previous timeline into branching choices between possible futures, only one of which is realized. So types are defined in relation not only to moments in time or finite intervals but also to the history and "tradition" that each moment contains and that each choice carries. The linear course of time is restored recursively so that p is true at time t if there is some history h' in p so that p is true at the time (h't). But, as we have seen, historicity depends on an inner relevance that presupposes a consciousness of both continuity and transformation that can only be described recursively. That is to say, it presupposes subjectivity.

Prior attempted to construct a logic capable of describing any system of rules and symbolism for representing and reasoning about sentences containing time. While formal logic can only handle sentences with a fixed truth value, in temporal logic, the truth value of sentences can vary depending on the time. So what is expressed is change, time as a sequence of transformations.

The image of the future as a place of probabilistic indeterminacy restores the present as a place of decision and action, as well as the past as a place of history. But the past is not the history of possibilities, but of the possibility-denuded total realities that preceded the possibility-embedded reality of the present. Thus the past is presented as a certain reality, the present as an actualized possibility, and the future as a contingent possibility. S foresight becomes uncertain.

Arthur Prior's temporal logic marks a gradual move away from the deterministic rigor of the determinations of formal logic, as well as an attempt to circumvent the contradictions posed by the very demand for universality and completeness of these determinations. Temporal logic, suitable for describing linear branched dynamical functions, has been further developed by computational systems theorists, with the addition of further temporal operators, and by AI theorists. Prior demonstrated the indeterminate diffusing through the unstable plates of the determinate. Without succeeding in defining the indeterminate, he succeeded in proving logically that the determinate cannot be complete, that the indeterminate is possible, and that contingency and impermanence can only exist.

But it also showed that contingency and impermanence, which are essential parameters for any representation of shared experience and any encoding of contingent behaviors, are dependent on temporality. And, of course, temporality presupposes subjectivity, it is subjectivity as far as the social-historical field is concerned, that is, as far as the technological system is concerned. And as such it can only be exogenous concerning the technological system, that is to say, originating from the physical subjects who signify it. This is precisely related to the ontological distinction and ontological continuity between the accomplished past and the contingent future within

the social imaginary of the present. Unlike a computer or a computer network or an AI neural system, memory is not just a repository of data and classification protocols that is enriched with each new computation.

On the contrary, as Walter Benjamin has argued, memory could be seen as the theatre of the past, the stage on which the past appears as the past. In living memory, the past finds its surplus of meaning within the historical flow as a latent multiplicity of its contingent significations not fulfilled in its present -

*"A remembered event is infinite because it is merely a key to everything that happened before and after it,"* he will note in his essay on "The Image in Proust." [Benjamin, 1996- 2003: 2,576]

And this means that there is a reconstruction of the past in the social-historical present as a reinterpretation of absence as a past of presence. But a reinterpretation of the past presupposes the social imaginary, since reinterpretation is the parenthesis of absence in the imaginary, while the place of reinterpretation, language, is a social place and the fact of reinterpretation is historical. Of course, this means that history is a transformation of both the given and the subject of language and knowledge.

Although the historical function of memory is beyond the jurisdiction of technological reproduction, it is fully influenced by the extension of technological reproduction into the field of aesthetic understanding and creative reinterpretation of the world, that is, into the field of art that shapes the 'innervation' of meanings. Walter Benjamin in his essay on the work of art "in the age of its technological reproducibility" in 1936 saw that the art of cinema is also the technical means for encapsulating the space of the body in the space of the image, bringing about a change of perspective, a transformation of the

vision of reality through mass education in the technological interpretation of history:

*"Cinema serves to train human beings in those new perceptions and reactions that are required by interaction with a device whose role in their lives is expanding almost daily. To make the vast technological apparatus of our time the object of human inspiration - that is, the historical task in the service of which cinema finds its true meaning."* [The work of art in the age of its technological reproduction]

If cinema was about the subjugation of the collective space of bodies to the space of the artificial image, digital technology is about the subjugation of the private space of the body to the space of the artificial image. Since then, the technology of representation has invaded every field of human existence. Cinema presupposes publicity, the semi-public space of the market, and the collective coexistence of the spectators' bodies in front of the screen. Next came television, which brought the privatization of viewing and the dominance of virtual technology in the private space of the home. The digital technology of "smart devices" moved the screen into the personal, bodily space of the subject, like a watch, like a mobile phone, like the ubiquitous interconnectivity of the psychic with the digital. It seems as if the space of the body has been completely taken over by the space of the image, so much so that the physical bodily presence seems to be withdrawn in favor of digital telepresence. What deeper field of penetration might the next technological stage of AI be about? Does the digital machine threaten to invade the realm of consciousness?

The Belgian thinker Mark Coeckelbergh points out the removal of the distinction between man and machine in the digital field of telepresence, in favor of the emergence of a bipolar subject-machine relation that is realized in the "technoperformances" of telecommunication networks. This digital dissolution of the human-machine distinction

is encapsulated in AI technology as the machine acquires the ability to respond and converse directly with the human subject in an indiscriminate mimetic manner. Bots and Deep Fake technology are based on the ability to digitally mimic the subject. With this ability of the digital machine's speaking, we can trace the beginning of the era of technological reproducibility of the face.

I assume that a real ontological distinction lies between the living being as a being-in-itself and inanimate matter - being-in-itself. Does this mean the revival of the Platonic dualism of mind-body or the Cartesian separation of spirit-body? No, because the living being is an inseparable mesh of the imaginary and the carnal, the psychic and the corporeal, while its own temporality is defined as a finite mesh of the dimensions of the inner psychic time of imaginary representations and the outer corporeal time of biological functions, determined by selfhood. This category of autonomy differentiates the living being, life, from the inanimate being, the thing.

What are the additional differences between inanimate objects and systems and living beings and biosystems? We can think of many, but let us limit ourselves to the two areas that concern us in the context of the philosophy of information: first, the internal organization, i.e. individualized structure [the individual] of energy and work distribution and its mediations with the larger system [the environment]; and second, the cognitive function, i.e. the ability to modify and transform its state according to changes in its environment.

We will observe two crucial radical differences between inanimate matter and living matter in two areas: temporality and interiority. Both relate to the category of selfhood, the feedback capacity to set oneself as a goal and to set goals based on oneself.

The living being as a being by itself, self-creates its temporality, contains the principle of its movement, i.e.

the principle of individualization and its inner becoming, creates its world as a world based on its own rhythm.

Similarly, Gilbert Simondon observes:

*"[T]he living being conserves in itself an activity of permanent individuation. It is not only the result of individuation, like the crystal or the molecule, but is a veritable theatre of individuation. Moreover, the entire activity of the living being is not, like that of the physical individual, concentrated at its boundary with the outside world. There exists within the being a more complete regime of internal resonance requiring permanent communication and maintaining a metastability that is the condition of life."* [The Genesis of the Individual: 305]

The living being as a continuous becoming is in principle temporality as internal variability and internal rhythmicity which is radically different from the fixed and concentrated structure of inanimate matter concentrated in the outer shell of interface with the environment. In this sense, the internal complexity of a bacterium is of a different ontological category from the structure of a microchip. Moreover, even a bacterium is in its individuation a living set of functions which, however, cannot be divided and disassembled - under penalty of death. On the contrary, inanimate matter can be compartmentalized and reassembled to a much greater degree. The totality of these functions is not only put to maintaining the balance and stability of structure but to reproduction and expansion in a manner that again refers to the living principle itself.

In this way, the living is manifested as potential selfhood according to its implicit self-alteration - it exists as a biological temporality, a process of birth and death, which is ontologically distinct, though not separate, from the process of collision and dissolution of inanimate matter in the first physical layer. The living is an immanently self-created temporality and is also an organic structure of

internal synchronization, as opposed to the heterochronization of the various elements that make up an inanimate structure:

*"The living person is as contemporary as each of its elements. This is not the case with the physical individual object, which contains a past that is radically 'past'."* [Simondon, 1992: 300]

The differences between animate and inanimate matter that Simondon identifies, define first of all the field of internal organization and interaction of form with the environment and lead to the implication that the living being creates an identical temporality which manifests itself precisely as interiority, in addition to the natural time of the exogenous gravitational effects of the material object.

This internal temporality of life is also the boundary of otherness between the living being and an automatic cybernetic machine in the cognitive realm. Cognitive transformation of data into information corresponds to the specific faculties of being-in-itself, meaning as a representation that stimulates feeling that mobilizes intention, and this is also a possible description of the potential temporality of the living in the basic function of autonomy.

We can complement this with the interiority of the living, its subjectivity as the imaginary place of transmission of this information, of formulation and presentation of this inseparable conceptual triptych of representation-feeling-intention as a way of potential self-alteration:

*"The living being can be described as an information node transmitted within itself."* [Simondon, 1992:302]

According to the above, an AI system hides a logical contradiction at its core, insofar as a technical system is not living. In the broadest possible interpretation of the concept of life, a mechanical-technical system is not a

being in itself. It has no interiority, no intentionality, no subject.

But we are still at the basic level of living and inanimate matter. The human subject and the machine belong to additional levels of correlation.

We set as a condition of distinction between living and inanimate matter the autonomy that characterizes the former as opposed to the absence of intentionality or purposefulness that characterizes the latter - and, on a second level, the vital unity and interiority of the former as opposed to the divisiveness and superficiality that characterize the latter.

But it is time to see what happens when inanimate matter is processed according to the imaginary finality of the human living being and when it is associated with the attribution of a particular form to the amorphous. What happens is the tool is an artifact and the machine is a functional system of tools, the artificial, the technique. In philosophical terms, the institution of the artifact.

As a concept, the artificial generally conveys the inanimate matter processed according to some practical finality, inanimate matter that takes the form of the machine; it is therefore the product of instrumental rationality and as such is distinguished from both inanimate matter and the animate. The artificial is endowed with an exogenous form of finality, an intentionality of the maker and the user that is inscribed in its form and function. And based on its specific finality it is assembled with the larger technological system of which it is a functional part.

So while inanimate matter does not present any perfection, the artificial contains the purposefulness of its creator which is similar to, but ontologically differentiated from, the autonomy of the living. The dependency of the machine and the autonomy of the living seem to have

something in common under the category of finality but their difference is not merely a difference of degree, but an intrinsic difference of operant categories and logical constitution. The form of the tool and the machine necessarily presupposes the action of another living being, the designer, whereas the form of the living is self-creation. The artificial is being for another, while the living is being for itself.

The confusion that arises when we ignore this ontological distinction leads us to the age-old fantasies of "animate tools" and "thinking machines". It also leads to the subordination of the living to the categories of the artificial and the subjugation of plant and animal nature to the necessities of artificial civilization. The Cartesian imaginary precept of rational domination over nature is based on the denial of the autonomy of other living forms and ecosystems and their leveling down to the level of 'natural resources', i.e. inanimate matter.

The imaginary interpretation of the living as a mechanism, the 'animal-machine' scheme where the body is posited as the materialistic and the mind [cognitive/propositional function] as software is the foundation of both Hobbesian political theory and Cartesian metaphysics and the precondition of the demand for man's domination of nature. In its Enlightenment origins, this conceptual scheme is linked to the broader conception of the universe as a mechanism and God as a mechanic that found its excellent mathematical formulation in Newton's physics.

The evolution of physics has limited Newton's authority to local systems, but philosophically and social-historically the problem is that the scheme revives the old Platonic ghost of the Rational Deity. In short, it presupposes God as Rational or Rationality as God.

Even the fall of God displaced the authority of reason in the apparatus itself, culminating in the domination of the

imaginary of technocracy, at the theoretical, political, and social levels. The imaginary of technocracy in the political realm is transformed into the ideology of bureaucracy and the Hegelian principle of the implicit rationality of the state apparatus - one of the theoretical foundations of totalitarianism.

After the military defeat of totalitarianism, which did not at all mean the defeat of its theoretical stereotypes and organizational principles, the schema inspired the cybernetic movement and guided the programs of what is euphemistically called "AI", both in the "hard" and "soft" forms we have described in the Introduction.

Today, digital neural networks are considered more rational than human flesh nodes, even though they are not able to set their final commands and their structure is precisely a product of the rationality of the human mind.

I argue that the term AI is misleading since it is impossible to contain the being by itself in its "cybernetic", mechanical-functional dimension. Therefore, the distinction between the living and the artificial is radical against the broader context of the mimetic relevance of the artificial to the natural.

Let us return to the question of the subordination of the artificial to the human. The rationality of the artificial mechanism is a product of the rationality of human beings, or rather it is a functional rationality constructed according to the imaginary purposes of human beings that by definition transcend them since they are social-historical creations.

Rationality is therefore a product of human consciousness and the social-historical imaginary. It acts upon the application of the schemas of determinacy and the principles of identity, non-reflexivity, and the exclusion of the medium. But already these principles are secondary schemes of the established opposition of finite-infinite.

But as the foundation failures of mathematics and the theorems of incompleteness show us, the roots of formal rationality are sunk in the ground of imaginary axioms - unthinkable foundations and unprovable positions.

The concept of infinity, for example, is easily shown to be a product of the very process of reflection in its pure reflexive form.

Mathematically, the infinitesimal periodic decimal  $0.\overline{9}$  is equal to 1. That is, the infinitesimal  $0.\overline{9}$  and 1 are two equal ways of representing the same mathematical entity.

The simplest proof is that  $3/3 = 1$  but also  $3/3 = 3 \times 1/3$ . As  $1/3 = 0.\overline{3}$ , so  $3/3 = 0.\overline{9}$ .

Uniqueness and multiplicity are not only related but are two types of the same entity. But here, two types of the same already mean something other than the same type.

There cannot be one without the many. The very thought of separation is a thought of unification. Plato's mistake is that he tried to think of the One alone. But the One is a type of the many coexisting as One.

Another example is when we think about ourselves. Once we think of him, he is both one and many - my imaginary image stands opposite me as the periphery and focus of the mental field. In every thought there is reduplication.

Bernhard Bolzano was an Austrian mathematician and priest - compatible preoccupations - who made the following argument for infinite thought: If T is a thought, let  $T^*$  be the proposition "T is a thought". T and  $T^*$  are in turn separate thoughts, described by the proposition  $T^{**}$ : "T and  $T^*$  are thoughts", so that, starting from any single thought T, one can obtain an infinite sequence of possible thoughts: T,  $T^*$ ,  $T^{**}$ ,  $T^{***}$  and so on. Thus, Bolzano considered that he had proved that God is infinite, a take

on what is required, since he was a Christian. But, since God does not exist, what he has shown is that a thinking subject can imagine infinity based on thought alone, being itself finite. Inter-subjectivity is a precondition of subjectivity.

Mathematics is the pure form of the logical code and the ensemblistic-identitary dimension of speech. Every linguistic phrase contains a logical symbolic structure and an imaginative semantic content - the former falls within the colloquial-literal and is encoded - the latter is grounded in the social-historical and is translated - their relationship is neither dialectical nor illustrative, but complementary and interpretive.

But if the code is the means, the semantic content that is transferred belongs to the imaginary and the semantic, i.e. the meaning-making aspect of language as a playful practice, through imaginative recreation and traditional reproduction, i.e. the social-historical. As we know, Wittgenstein attempted in his first philosophical treatise, *Tractatus Logico-Philosophicus*, to solve all philosophical problems at once by regarding them as linguistic abuses and misunderstandings of the nature of language, which he wanted to reduce to figuration, the logical representation of the facts of the world. In the representations theory of the meaning of language, the significance of a word is determined by the thing it represents, ambiguously.

Of course, the attempt fell into the vacuum that the theory itself created where there should have been a theory of poetic metaphor, synonymy, metonymy, and social-historical transformation of meanings. The genius Wittgenstein himself realized his failure and turned in another direction, based on the concept of linguistic games and language as an intersubjective action with a sociological framing.

Wittgenstein's "linguistic turn", together with the necessary ontological reference, marked the transition of the terms of representation of reality from the mind to a system of rules for the use of signs. The Kantian idea is modified as representation becomes symbolic and conditions of representation become the rules of logical syntax. This transition shows that the foundation of knowledge is conceived intra-linguistically. The exploration of concepts that develop in the spectrum of the linguistic field, such as linguistic normativity, language games, family resemblances of concepts, idiomatic language, and forms of life, underscore the problematic nature of Wittgenstein's later work.

What this reduction of language to a logical/pictorial code ignores is the existence of a poetic/imaginary dimension of being, which will be defined as the immanence of the possibility of ontological creation, which is interwoven with the identitary dimension as inherent modes of being (of being as time, hence as to-be). Without the recognition of the social-historical, the solidarity and difference between the identitary, repetitive dimension and the poietic, creative dimension of linguistic acts within time cannot be understood, as, moreover, can the complex relations between them, which are intertwined at multiple levels.

Moreover, language itself is a constituent element of the social imaginary and a necessary means of socialization and the formation of human subjectivity. Through transubstantiation and language, the soul takes on socially instituted forms and their meanings. The essential operative schema of this relation, the quid pro quo, positing the signifier as a representation (*Vertretung*) of the absent signified, is a primary imaginative creation that is presupposed before any process of logical constitution of concepts. It is a schema that precedes any logical organization since the terms in question and their

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reported significations must have been given through language as social terms.

In the social-historical realm, existence is significance - a carrier of meaning - and the way meaning is invested in the word presupposes the subjective psychic capacity of sublimation [of imaginary representation into meaning] and the social-historical capacity of transference [the transformation of the meaningful contents of words].

This means that any encoded language, such as digital programming languages and algorithmic codes, can be a carrier of meaning that it represents in one dimension without interpreting it in its entirety. The hermeneutic principle belongs to the higher historical magma of social imagined meanings, and of living users of language in ordinary everyday public time.

This is precisely why digital AI applications based on Large Language Models [LLMs] are dependent on digital social telecommunication and telepresence networks to obtain the data necessary for their training, machine learning, and operation. They require not only human subjects at the beginning and end of their operating system, but in addition a global digital internet of billions of human subjects whose personal data feed the system. The temporal structure of experience determined by recursive expectation involves an activity of transformation and formalization so that each social-historical event is both a fixed temporal marker and a constantly changing reference - the very energy of the inner change and alteration of historical time is linked to the magmatic nature of social imaginary signifiers, that is, the historically determined spaces of past experience and future expectation and their transformations.

An event, in simpler language, is a succession of historical incidents that carry a reinterpretable social meaning. The fact contains narrativity and is also meaningful in a narrative way. As its meaning must be socially intelligible.

## Artificial Intelligence and Barbarism

In this sense, historicity creates facticity, just as the social imaginary creates the ideality of concepts.

A concept is a conceptual framework for interpreting a social-historical phenomenon or a bundle of phenomena. A concept involves rationality {normal criteria of association and validation}, a valid and/or correct meaning. What is a valid argument? It is the specific necessary logical relationship between premises and conclusion (when premises are true the conclusion must also be true).

What is a valid argument? It is an argument whose premises are true.

But truth is based on factuality based on the historicity of social coexistence but aims at the contingency of future prediction to validate it. Truth is related to a project of clarification and understanding, a project that determines the possible transformations of the temporal structure of experience and the horizon of expectations it projects.

And what meaning can the fact of the nuclear annihilation of a city have? What is the truth behind the event? It is difficult to be bridged by subjective consciousness, as the experience is inaccessible, it cannot be accessed through imaginative revival by analogy.

We can opt for another narrative structure, the simple juxtaposition of events. But the very choice, among the infinity of incidents, of appropriate connections conceals an evaluative decision. If we remove from historical interpretation the subjective experience, towards a simple chronological sequence, we lose the active agent behind the events, the human subject. Without a subject there is no meaning, there is merely succession.

The meaning of historical events cannot be reduced to their mere chronological succession, because the meaning of human existence is not chronology but temporality. It is always the meaning it has for human

subjects, such that even the unspeakable can be made transmissible through the imaginative poetic creation of a subject, through the perforation of social-historical time by experienced subjective temporality.

The above remarks are a warning against the imaginary of technocracy, the quantification and digital binary representation and simulation of social-historical time. The poetic clarification and understanding of the event is what gives it its meaningful depth for human consciousness. The oblivion of the imaginary dimension of experience through technocratic interpretation is itself the imaginary of man's subordination to the machine.

This aspect of technological brutality, the use of instrumental rationality for annihilation, has since defined our horizon of expectation as a horizon of annihilation. It is the barbarism of modernity in its uncontrolled form. But technological progress does not stop while technology transitions from its industrial to its biodigital evolution.

Historical developments of decisive importance after WWII were the opening of the advertising market as a central sector of economic expansion and profitability, the opening of the television sphere to the general public, the interconnection of stock exchanges as a central hub of financial forecasting and speculation, the explosion of telecommunications and telematics technology, the division of the planet during the Cold War and its subsequent war plowing by the networks of circulation of capitalist products and the multiple fields of manifestation of state interests, the explosion of ecological catastrophe, have defined the historical past of our era in the transition to the ontological revolution of the digital. Public opinion seems to be herded towards imposed obscurity and widespread ignorance around AI technologies that serve the interests of speculative markets and advertising campaigns regarding AI products.

### Chapter Three: THE IDEOLOGY OF AI

#### Deus in Machina.

*δόκος ἐπὶ πᾶσι τέτυκται - docos epi pasi tetyktai*

[an opinion (δόκος) is constructed (τέτυκται) for all things (επὶ πασὶ)]

- Xenophanes of Colophon, 6th century BC

It seems that AI is an ontological challenge to the foundations of the modern self-perception of subjectivity.

When we consider that the 20th century was an era of unique technological achievements, perhaps culminating in the moon landing, when for the first time three people - that is, humanity - stood on the moon and saw the Earth from afar, we are struck by the fact that there was no formal theological reaction to technology. On the contrary, in recent years, since the official launch of ChatGPT on 30 November 2022, the official theological reactions to AI have been numerous, repeated, and emphatic.

A recent example in Greece was the international conference entitled: PHAICON 24, organized by the Institute of St. Maximos, under the spiritual and material support of the Holy See of Vatopedi and the Office of the Ecumenical Patriarchate in the European Union, with 115 participants from 18 countries. The conference conclusions included the following:

"It was emphatically emphasized through the teaching of St. Justin of Chelias that while in secular thought the measure of all money is Man, for Christians the measure of all money is the God-Man. [...] The observations that could be made are as follows: Theology and philosophy

meet the question of man more strongly than perhaps ever before. The meaning of existence will be constantly at the center of interest. The anthropological model that societies choose to follow will determine the future of the societies themselves."

From the above findings, we see that AI forces theology to descend, from the sober position of supreme authority to a struggle of "anthropological models" that more or less equate the realm of spirituality with the realm of digitality, implicitly but essentially abolishing claims of authority in the metaphysical foundations of any theology.

Why is this happening?

First of all, it must be emphasized that the above concerns the unimaginable General AI, i.e. the taking of the title "AI" literally, as if it were a real intelligence. But the existing Large Language Models circulating on the Internet and being developed commercially are not "intelligence", so the title is rather an advertising slogan - but a very successful advertising slogan, which transforms the horizon of expectations of the social imaginary, and thus transcends the advertising field.

As Luciano Floridi points out, there is no given definition of AI, and current applications are an unprecedented separation of "agency" and real intelligence, where certain actions can now be performed without intelligence. Similarly, Kate Crawford notes:

*"Artificial intelligence, then, is an idea, an infrastructure, an industry, a form of exercising power, and a way of seeing; it's also a manifestation of highly organized capital backed by vast systems of extraction and logistics, with supply chains that wrap around the entire planet. All these things are part of what artificial intelligence is—a two-word phrase onto which is mapped a complex set of expectations, ideologies, desires, and fears." [The Atlas of AI: 19]*

Yet Floridi warns that social reality is being "enveloped" in such a way that dominant structures of production, communication, and consumption are being transformed to make them compatible with the use of AI programs, and Crawford points out that "these are physical infrastructures that are reshaping the Earth while changing the way we see and understand the world."

Consequently, the techno-scientific program of AI, as an applied technology, is reshaping our social reality in a way that, as a business pursuit, transforms the horizon of expectations of the social imagination with metaphysical claims.

I hypothesize that the metaphysical presuppositions of the technologically unattainable but narratively intoxicating "Hard" or General or Cognitive Artificial Intelligence [AGI] program, i.e., the Thinking Machine, overlap the traditional metaphysical presuppositions of organized religion: Namely, the human dependence on an indestructible and a-temporal form of consciousness, will and intelligence that transcends human capacity for understanding.

In other words, AI threatens to substitute or replace religion as the central metaphysical model and ontological limit of human subjectivity.

Just as religious priesthoods manipulate ritual and 'sacred' experiences of transcendence in such a way as to produce 'miracles' that suggest the existence of a transcendent God/Mind, similarly digital corporations manipulate 'intelligent' individual applications and Large Language Models of text processing and dialogue reproduction in such a way as to produce 'miraculous results' that suggest the possibility of the emergence of a supra-human Thinking Machine.

Thus, we observe with surprise the resurgence of theological questioning and metaphysical problematics.

Let us also mention a more recent point from the 9th art world that sums up the new metaphysical problematic of digital reality.

The brilliant Grant Morrison warned us as early as 1994 of the coming pseudo-philosophical excesses when in his masterful comic strip *The Invisibles* [issue 14] he depicted Jesus saying in a car:

"- Everything is just trying to evolve, man. We're trying to evolve out of the physical realm and the rocks, which are denser than us, are trying to evolve in our place. That's what computers are, man. Silicon microchips are the spearhead of the evolution of minerals into human-like intelligence."

Let's remember that the World Wide Web was publicly launched a few months before the comic was published, on April 30, 1993, when Grant M. was a pioneer in the artistic exploitation of digital technology as a source of inspiration for fictional dystopias. Now the public discourse is shifting towards the problematic that the Scottish author ironized through the promises and precepts of AI.

That is, towards a new theology of technology, a Deus in Machina.

Let us summarize the theological issue in Western thought in general in the problem of the existence of a supra-human intelligence/will/intention that consciously regulates events and transcends the human social world it encapsulates.

John Damascene in his treatise "An Exact Version of the Orthodox Faith" briefly states: "that which is in the image of the intellect and the self-existent", and with this phrase, he summarizes the whole previous Patristic Tradition. *Nous* is the mind that God gave humanity to think and decide before doing anything, while "the αὐτεξούσιον" (free will) which in its terminology comes from Stoic and

Neoplatonic Philosophy is the movement of the mind. St. Gregory Palamas points out.

That is, God is Consciousness, Mind, and Knowledge outside of human historicity.

Thus theology resolves through abrogation the question of time, impermanence, duration, and death. Let us also note the identification of mind and self-autonomy, as well as the dependence of human freedom, of self-autonomy on the rational mind, which, however, springs from above - from God, in the image of God.

This is the fundamental axiom of all theology. That finite human intelligence is dependent on some infinite superhuman intelligence. Of course, there is a radical difference between the axiom of theology and the fantasy of General AI. The theological imagination posits supra-human intelligence *a priori*, while the scientific imagination posits *a posteriori* human intelligence. This is the temporal-genetic-historical dimension. Beyond this, however, the conceptual scheme is so similar that it stirs up the anthropological problem.

If God is a superhuman mind, then any superhuman intelligence could self-identify as God or we could not prove that it is not God. If the AI becomes a superhuman mind, then it can take the place of God.

However, AI is a creation of the human mind. This may mean that it becomes the creation to prove itself superior to the creator. So man can prove himself superior to God. Either the creation cannot be proved superior to the creator, in which case we are talking about a false deity. So the AI will not become a superhuman mind. But then there is no problem in the first place. The issue is phenomenal. But how do we establish that the AI will not become a superhuman mind, since we have already accepted the existence of a superhuman mind as the

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basis of theology? So is God also a creation of the human mind?

We see the danger in the minds of theologians: the specter of General, Autonomous AI replacing theological with a technological transcendence. If they accept its possibility, then there is a danger of undermining the transcendence of the divine by equating God with a Machine. If they deny its possibility, then they undermine the very theological axiom that there is a mind superior to the human mind.

But what if we do not accept that there is a mind superior to the human mind? Then we definitively abandon the territory of theology for an anthropology of impermanence. We can put it as a relativistic limit, in the sense of our ontological cognitive limitation to the creative possibilities of human cognition. It is the agnostic argument concerning the world in general that can nevertheless be made aware concerning the social-historical world.

It is the humanistic argument based on the acceptance of the social imaginary as the immanent source of all ideality and transcendence. Human intelligence is constitutive of the social-historical world and its creations. That is, according to its effects, which are equally technologies and fantasies on technologies, the human imagination is implicitly transcendental, ontological, and metaphysical in terms of the deeper social significations and articulations of instituted society.

As we can see, the agnostic argument regarding the world leads to an atheistic conclusion regarding the transcendent. God is predominantly a social imaginary creation. Incarnate and first. Without any physical ancestor or counterpart fundamentally regulating the social institution of power, relying solely on the poetic and imaginative dimension of language and experience. The deity is also a narrative entity.

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As H. Dreyfus has asserted, human intelligence relies on unconscious and subconscious processes, while all computer processes are formalized.

Every linguistic act is therefore completed with the indispensable assistance and synergy of the human subject. It is therefore better to speak of a machine-user AI information system, where the machine provides the syntactic structure for classifying and recombining the data as digital bits and the human subject provides the semantic imagination for evaluating and judging the data as information.

This is an integrated linguistic act that presupposes, at the beginning and end of any AI system, the human subject. Not a Thinking Machine but a Machine for the Production of Coded Representations that can be used to manipulate or inform the imagination of other human subjects.

AI is a derivative of the confluence of language/say and technique/technique in the digital realm. It requires a society of users, just as religion requires a society of believers.

As a generative control machine, AI overlaps religion in the realms of imaginative response and disciplinary manipulation of subjects. Theologians are right to be concerned.

But beyond theology, every machine is a technical fact, a creation of the technical imaginary. AI is furthermore a system of mechanical organization and reproduction of the symbolic imaginary, of saying. Hence it is falsely marketed as an autonomous saying, i.e. an independent interlocutor, autonomous intelligence.

Google in February 2025 announced that it was changing its corporate policy and removing the "ethical prohibitions" regarding the use of AI for weapons and surveillance systems. It announced this officially to

attract customers interested precisely in the use of AI for weapons and surveillance systems. The auction has started, an auction of the digital municipality, that is our data. Against the real municipality, i.e. against us and outside the digital one. Models do not need to be perfected to mobilize the speculation machine that feeds on the promise of perfection.

As Alondra Nelson, Thuy Line To, and Alicia Headlamp Hines observe, "Competitions around technology are always linked to larger struggles for economic mobility, political maneuvering, and community building."

In this competition, which is shaping our present and future, we seek ways to intervene collectively and democratically, as aware citizens rather than as users, consumers, or believers in some Engine of God.

### **The Game behind the Game: Artificial Intelligence and the Political Imaginary**

The public launch of ChatGPT in late November 2022 brought the debate on Artificial Intelligence [AI] software into the global spotlight. A few months later, Noam Chomsky told the New York Times on March 8, 2023:

"Let's stop calling it 'AI' and call it what it is: "plagiarism software." It doesn't create anything, it copies existing works by existing artists by modifying it enough to escape copyright laws. It's the biggest theft of property since Native Americans were removed by European colonists."

Chomsky's concern is not that AI will somehow, paradoxically, substitute for human intelligence, but that it will become predominantly a tool of plagiarism. The plagiarism he refers to is the creation of secondary works of speech, image, and art from variations of different

originals. This concern was one of the causes of the four-month strike of Hollywood writers in the summer of 2023. How can we address this issue?

If I instruct an AI program to write a poem, it will do it. Some will say it is not a poem, since the machine wrote it, so it lacks poetic content, others will say it is, since it will be in the form of poetic writing. But who will own the copyright of the poem? Or of the image or melody produced by a Generative AI? -

"If the traditional intellectual property elements of a work are machine-generated, the work lacks human intellectual property and the Office will not register it." was the official US Copyright Office until at least the first semester of Trump's second Presidency.

We could say that it is a common property from the beginning. But is it? Not, since it is a private and marketable product. The US institutional framework is not sufficiently updated to deal with such forms of plagiarism.

On Friday 2 February 2024, the countries of the European Union reached the first global agreement to regulate AI, agreeing on the EU AI Act.

The Act adopts a risk-based approach and classifies AI applications, accordingly, into 4 categories [prohibited/high risk/moderate risk/minimal risk], applying specific controls and restrictions per category. Of particular interest is which applications are banned for good in the EU.

[[https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698792/EPRI\(2021\)698792\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698792/EPRI(2021)698792_EN.pdf)]

A glance at the summary of the law shows that the prohibitions apply to the spreading of false news, the spreading of racist stereotypes, monitoring, and recording, preventive suppression, and identification -

except of course when the tools are used by legitimate exemptions of state mechanisms:

**"Prohibited AI practices.** The final text prohibits a wider range of AI practices than originally proposed by the Commission because of their harmful impact:

1. AI systems using subliminal or manipulative or deceptive techniques to distort people's or a group of people's behavior and impair informed decision-making, leading to significant harm;
2. AI systems exploiting vulnerabilities due to age, disability, or social or economic situations, causing significant harm;
3. Biometric categorization systems inferring race, political opinions, trade union membership, religious or philosophical beliefs, sex life, or sexual orientation (*except for lawful labelling or filtering in law-enforcement purposes*);
4. AI systems evaluating or classifying individuals or groups based on social behavior or personal characteristics, leading to detrimental or disproportionate treatment in unrelated contexts or unjustified or disproportionate to their behavior;
5. 'Real-time' remote biometric identification in public spaces for law enforcement (*except for specific necessary objectives such as searching for victims of abduction, sexual exploitation or missing persons, preventing certain substantial and imminent threats to safety, or identifying suspects in serious crimes*);
6. AI systems assessing the risk of individuals committing criminal offences based solely on profiling or personality traits and characteristics (*except when supporting human assessments based on objective, verifiable facts linked to a criminal activity*);

7. AI systems creating or expanding facial recognition databases through untargeted scraping from the internet or CCTV footage;
8. AI systems inferring emotions in workplaces or educational institutions, except for medical or safety reasons."

If we look at the text, we will realize that the risk of plagiarism is real, but it is also the smallest risk of those included in the AI capabilities.

Surveillance, recording, preventive repression, and manipulation of public opinion are within the range of these possibilities. Some of these are used by the Chinese regime to monitor, record, and evaluate the inhabitants of the vast country.

Some have been used by anonymous individuals, such as the manipulation of public opinion through the production of exact voice and image replicas - deepfakes. The most recent such effort in the US involved a fake recorded message from Biden calling on residents of one state to abstain from the 2024 election.

EU states were the first in the world to put in place an institutional regulatory framework that protects the population from such possibilities - unless they are to be used by the states themselves, as the framework explicitly provides. Is it a pessimistic assessment that they will be used?

As we read in the Telegraph, in early 2024 some researchers at Oxford University asked artificial intelligence software to design a perfect rail network where there was no chance of accidents or train collisions. The AI program came up with an unexpected solution - to stop trains running altogether.

We mentioned the "black box problem": we feed the algorithm with data and it gives us selected answers, but it does not explain the rationale by which it chooses those

answers. This is related to the architecture of mainstream AI applications, based on the feedback functions of Machine Learning, Big Language Models, and statistical data analysis.

Yuhang Song, Beren Millidge, Tommaso Salvatori, Thomas Lukasiewicz, Zhenghua Xu & Rafal Bogacz of the MRC Brain Network Dynamics Unit and the Department of Computer Science at the University of Oxford published an article Inferring neural activity before plasticity as a foundation for learning beyond backpropagation in the journal Nature and Neuroscience on 3 January 2024. The article listed the conclusions of their research which are summarized in the abstract as follows:

*"For both humans and machines, the essence of learning is to pinpoint which components in its information processing pipeline are responsible for an error in its output, a challenge that is known as 'credit assignment'. It has long been assumed that credit assignment is best solved by backpropagation, which is also the foundation of modern machine learning. Here, we set out a fundamentally different principle on credit assignment called 'prospective configuration'. In prospective configuration, the network first infers the pattern of neural activity that should result from learning, and then the synaptic weights are modified to consolidate the change in neural activity. We demonstrate that this distinct mechanism, in contrast to backpropagation, (1) underlies learning in a well-established family of models of cortical circuits, (2) enables learning that is more efficient and effective in many contexts faced by biological organisms and (3) reproduces surprising patterns of neural activity and behavior observed in diverse human and rat learning experiments."*

[<https://www.nature.com/articles/s41593-023-01514-1>]

The researchers examined the associative descriptions of changes in neuronal behavior and synapses and identified

a fundamentally different learning principle from artificial digital neural networks. In artificial neural networks, the external algorithm tries to modify connections to reduce potential error; the human brain first adjusts the activity of neurons to an optimal balance before adjusting synapses. Researchers call this process "prospective configuration" or "prospective configuration). The human brain thus uses a learning process oriented to the preconfiguration of the future expectation horizon based on past experience, to create and predict the future, while digital neural networks use a retrospective adjustment of the data, i.e. a mimetic/statistical prediction based on the reproduction of past experience.

The researchers conclude that the plasticity of the human brain is far superior to the learning capabilities of digital machine learning systems. The brain can retain new information the first time, along with its potential range of associations, while artificial systems must be trained recursively on the original data every time. Furthermore, the brain combines new information while retaining the knowledge we already have, while learning new information in artificial neural networks often interferes with the stored data recursively, often degrading older associations. The machine draws on the already recorded experience to present possible updates to it but cannot, ontologically, be projected into the expectation of the new. In this sense, it has no inherent temporality but an exogenous historicity. Every machine remains a human tool.

This was demonstrated in the first year of ChatGPT's operation. According to the incident report for ChatGPT, OpenAI wrote:

"On 20 February 2024, a user experience optimization introduced a bug in the way the model processes the language. LLMs generate responses by randomly

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sampling words based in part on probability. Their "language" consists of numbers corresponding to tokens.

In this case, the error was in the step where the model selects these numbers. As if "lost in translation", the model chose slightly wrong numbers, which produced sequences of words that made no sense. More technically, the inference kernels produced incorrect results when used in certain GPU configurations.

After identifying the cause of this incident, we released a fix and confirmed that the incident was resolved."

According to a study by Purdue University, which analyzed ChatGPT's answers to 517 questions on Stack Overflow, to assess the accuracy, consistency, completeness, and conciseness of ChatGPT's answers, 52% of ChatGPT's answers are incorrect and 77% are verbose.

"However, ChatGPT answers are still preferred 39.34% of the time because of their completeness and well-articulated language style."

This should give us a worrying indication. The user audience is not so much interested in the truth but in the style of the mechanical response. The social imaginary is open to digital manipulation.

A different approach is Ethics by Design [Ethics by Design] puts the emphasis on the design phase of digital applications and proposes the incorporation of "ethical" mandates that can appropriately constrain and orient the core capabilities of the digital AI system.

What we see in the digital world around us is that the values of profitability and the extension of control also inspire the design of the available AI applications and materialize in the practices of targeted advertising, data mining, and user manipulation.

Of course, the idea of ethical safeguards to limit the destructive potential of AI is contemporary with the very

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conception of AI. Isaac Asimov's 3 Laws of Robotics from 1942 are well-known:

- "1. The robot will not harm a human being, nor by its inaction will it allow a human being to be harmed.
2. The robot must obey the orders given to it by humans unless those orders contradict the first law.
3. The robot must protect its own existence as long as this does not conflict with the first and second laws."

But even these three, seemingly simple, commands open themselves up to a multitude of contradictory interpretations. What does "evil" mean to a human being? Is a doctor who cuts off a patient's leg to save his life doing evil or not? Does the evil lie in the act or the purpose? And what about the unintentional act that does evil? Is evil about the present situation or future well-being?

In the defensive use of brain imaging techniques (use of the brain as a presumption of innocence), the way in which the justice system defines the 'guilty mind' plays a key role. According to this definition, as presented in the relevant memorandum of The President's Council on Bioethics, the 'guilty mind' is associated with four mental functions: - 1) Purposefulness. It refers to fully conscious and purposeful action to achieve a certain unlawful purpose; - 2) Knowledge. It refers to the awareness that a certain action in which we are involved has a certain result. That is, it refers to the action with knowledge of its result - 3) Recklessness. It refers to the conscious disregard of the danger of an act - 4) Negligence. Causing harm to the probability of which we should have known.

Therefore, the 3 laws are not just buffers but commands that define purposes, that orient the robot's actions. These are the only asserted intrinsic purposes of an AI machine, which can only serve extrinsic purposes. But then the intrinsic purposes have, by design, priority over

any extrinsic command. The purpose of the 3 laws may be to limit the capabilities of the robot, but their consequence is in the first place to elevate these laws to the primary purpose of the robot. In a way, the incorporation of moral safeguards limiting the AI's independence increases its autonomy.

Ethical questioning opens up a whole range of philosophical questions about the meaning of human existence. We will get different results if we define man as a rational being, different if we define him as a reclusive and isolated being, and different if we define him as a productive being. Good and evil will be defined accordingly by outside observers.

If we want to eschew the cultural relativity of moral values in favor of an "objective" utilitarian principle based on external observations, as if we were talking about animal husbandry rather than human communication, then the consequences look worse.

The concept of 'objective' utility is related either to the maximization of a basic common good, i.e. to an objective function of common needs, such as resources, or the enhancement of the balance of a group towards the satisfaction of its constituent subjects after observing their habits and behaviors.

Which subjects would the "utility function" that we could incorporate into a design self-sufficient AI concern? If it applied to all of humanity, the utility function would equal the lowest common denominator of human needs. By what method could we arrive at such a quantity? Would a general objective such as the development of productive forces suffice? But then what about the ecological destruction caused by economic growth? Shouldn't the overall goal be ecological balance? But then what about our energy-intensive lifestyle or crises of scarcity? Shouldn't the overall goal be the harmonious preservation of our way of life? But then what about diversity, contrasts,

multiculturalism, individual freedom, innovation, and questioning? And which way of life is optimal?

### Artificial Intelligence and Surveillance Capitalism

In December 2019, former US President Barack Obama placed Shoshana Zuboff's *The Age of Surveillance Capitalism* at the top of his Christmas list of recommended books in a possibly deliberate ironic gesture. During his presidency, Obama made full use of the surveillance and repression state and expanded government surveillance powers by repeatedly using Executive Order 12333, issued by Ronald Reagan in 1981, in the context of the Cold War and later used by George W. Bush in the context of the War on Terror. This executive order is aligned with what Zuboff calls surveillance capitalism, whose raw materials are the personal data and information of every user. (Zuboff, 2019) Obama's administration bears responsibility for deliberatively promoting surveillance capitalism and for the persecution of those journalists who dared to unveil such abuses of power via WikiLeaks, namely Julian Assange and Edward Snowden.

However, if we want to trace the beginnings of digital surveillance methods targeting users we should, according to Zuboff go before Obama's administration, to the first year of our century.

Zuboff defines Surveillance Capitalism as such:

*Sur-veil-lance Cap-i-tal-ism, n.*

1. A new economic order that claims human experience as free raw material for hidden commercial practices of extraction, prediction, and sales; 2. A parasitic economic logic in which the production of goods and services is subordinated to a new global architecture of behavioral

*modification; 3. A rogue mutation of capitalism marked by concentrations of wealth, knowledge, and power unprecedented in human history; 4. The foundational framework of a surveillance economy; 5. As significant a threat to human nature in the twenty-first century as industrial capitalism was to the natural world in the nineteenth and twentieth; 6. The origin of a new instrumentarian power that asserts dominance over society and presents startling challenges to market democracy; 7. A movement that aims to impose a new collective order based on total certainty; 8. An expropriation of critical human rights that is best understood as a coup from above: an overthrow of the people's sovereignty.* (Zuboff, 2019: 9)

According to the author, this all amounts to an act of digital dispossession, which began in 2001 when the CEO of Google at the time, Larry Page, realized that "human experience could be Google's virgin wood" (Zuboff, 2019: 71) if the data of the users' search choices within Google's browser could be "rendered as behavioral data, producing a surplus that forms the basis of a wholly new class of market exchange."

The language used by the author is sharp and pointed because they understand the extent of the ignorance that the general public has about the loss of control over their personal data as a standard commercial practice of several oligopolistic companies. AI programs, basically Big Language Machine Learning Models, rely on the same redundancy of data in order to train and refine/accelerate response and reaction processes.

This places two inherent limitations on the system:

First, it binds it to managing and updating the already given, in a constantly past representation of the instituted, without being able to capture innovation, otherness, or instituting creativity. However, as large social systems of interconnection, communication, and exchange are

enriched with AI software, this inability to represent the radically new may lead to greater censorship and repression of the radically new.

Second, it binds the system to a finite reservoir of power, since the goal of acceleration and refinement, i.e. multiplication of computational capacity, meets a limit in the available literature on human interactions. If the computational capacity of the neural digital system exhausts the already available interactions, the feedback loop that sustains the learning mechanism stops. To the extent that we participate in the internet and manage our digital representation and avatar, we inadvertently participate in the network of training and improvement of AI systems and digital surveillance mechanisms. In this sense, the human subject as a social and communicative being is the necessary and sufficient condition for the existence of AI, which is not an isolated mechanical system but a hybrid information mechanism of user/machine interface.

There is also an external physical boundary. The energy consumption of AI programs may soon meet the limit of available physical resources. This is one of the most threatening, as it is unseen by the general public, effects of the associated technology, namely the consumption of electricity and fresh water, and the consequent environmental burden.

An assessment of ChatGPT's energy consumption showed that it currently consumes the energy of 33,000 homes per year. In 2023, a lawsuit filed by residents of West Des Moines, Iowa, revealed that the OpenAI data center operating ChatGPT-4 consumed about 6% of the region's water. And this is just one model, from just one company. In January Sam Altman, OpenAI's CEO admitted that nuclear fusion technologies would be needed to find the energy needed to further develop AI. But who decides on the production and use of the energy?

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Can these developments reassure us about the future? Probably not. But we can perhaps see more clearly that the problems brought about by AI are not existential or ontological, but social, political, and ecological. The policies for regulating corporations already enacted by the EU and debated in the US reflect precisely the political correlations, partisan agendas, and social dynamics at the municipal, state, and international levels. However, during the spring of 2025, the Trump administration has tried to pass a bill that would prohibit the States of the Union from implementing any regulations over AI companies for ten years.

By shifting the frame of discussion to the realm of political decisions that determine what is permissible and legal in terms of research and application, we can discern the human factors at the basis of technical systems and transcend spectral dystopias in the direction of exploring the depth and passion of the social-historical reality of the digital age.

Are there escape routes or possibilities of subversion? Escape essentially also means the subversion of the dominant paradigm of governance and hierarchy. However, the diversity and connectivity of the digital system open the possibilities for the use of AI software as well in the context of a different political paradigm, horizontal digital commons, and direct democracy.

As a logical form, the horizontal network of mutual and equal interactions based on the free and open circulation of knowledge, information, and economic values seems to be relevant to the information structure of the global internet, of which the various AI applications are subsets. The basic condition for interconnection is accessibility, as the machine uses the human symbolic language.

However, the human world is not a functional rational system but a social-historical world, where instituted political expediencies dominate the social imaginary and

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capitalist institutions dominate access to resources. The critical significations and values that orient social activity do not belong to the technical categories of instrumentality.

Names like Elon Musk and Peter Thiel, sponsors of US President 2024 Trump, are world-renowned pioneers of the modern version of technocracy, which is the most socially active embodiment of anti-humanism. The selection of JD Vance as Vice President of the US reveals the rise of this group to the highest echelons of the most powerful state power on the planet.

Interestingly, this attempt to subordinate politics by technocracy is driven by private capital and is a conscious effort to guide and reinforce capitalist tendencies of reification, quantification, and alienation of people. We should note that although their project is the digital automation of politics and the complete control of social events by one - disinterested and without virtue, therefore anti-platonic - elite of programmers, the means they use are primarily political, such as conspiratorial propaganda, funding conservative candidates, supporting selected state oligarchies, empowering far-right movements with communicative and economic power, interfering in national elections, controlling digital social networks such as X.

It is here, and not in technological innovation, capitalist systemic architecture, or economic surface, that their weakness lies. In their dependence on politics, which they seek to abolish.

But dependence is vital, the political is the only way to legitimize state power in society. The political expresses the capable and necessary explicit processes of identifying the individual imagination with the social imaginary and instituting power.

No one would be sacrificed for a corporation but for a nation, a religion, a social - not a private - imaginary supreme goal. The political is an inescapable condition of the human condition. But the political has multiple forms, and most of them are based on the internalization of repression and the alienation of heteronomy. Only the democratic political forms of the great historical movement of equality and emancipation aim at the realization of social and individual autonomy. But all of them are also based on the management of the information flow in public time and space.

We could therefore say that technocracy, even if it cannot fulfill its ultimate purpose, can serve its purposes in similar political forms of state administration, what Varoufakis called "techno-feudalism". Indeed, the multi-federal transnational unification of the world's regional cultural and political regions brings the organizing principles of a digital technocratic administration. The strong tendency of federal transnational mechanisms such as the Eurogroup to protect themselves against representative institutions and against society is consistent with the technocratic vision of the closed oligarchic state.

The modern institutional forms of digital barbarism, the digital mechanisms of identification, classification, monitoring, and extraction of personal data are already dominant. The political and institutional framework of technocracy is emerging as a parasitic digital web around traditional institutions of representation which are declining.

These aspirations of the far-right technocracy are long-standing and reinforced by the already dominant trends of the globalized capitalist system. And of course, they are consistent with the alienating aspects of the digital revolution.

One of these aspects is the personalization of digital services and the personalization of digital communications that has occurred with the emergence of the second version of the Internet, Web 2.0.

Today, as we can see, we have come a long way beyond Dyson's 'intelligent' Internet. We have crossed the threshold of the era of social digital networks and permanently inhabited the Internet, creating new, digital forms of communication and spheres of interaction. We have fully entered the era of individual telepresence [see Introduction].

Social media are interactive Web 2.0 applications based on the Internet.

1. User-generated content - such as text posts or comments, digital photos or videos, and data generated through all online interactions - constitutes the content of social media.

Therefore, users themselves provide the product they consume.

2. Users create service-specific profiles for the website or application, which are designed and maintained by the social media organization.

Therefore, the users themselves inhabit the digital website as isolated digital persons who communicate in fragments while being constantly monitored.

3. Social media operate by developing online social networks by linking a user's profile with those of other individuals or groups

Therefore, users themselves create structures of fragmented and selected representation and promotion of broader purposes, always under the surveillance of the company that owns the medium, and always under the threat of censorship and data deletion. What were the characteristics of this transition?

First of all, we are moving from the period of human-computer interaction to interaction between digital persons over the network. The interaction is essentially communicative, as described above, but also, inherently, consumeristic. The very architecture of digital social networking sites serves the advertising model and the choices available to the user are options for viewing and evaluating digital products, among which the digital face plays a dominant role. But, as we have seen, the devotees of technocratic oligarchy have long-term visions, which are implemented gradually, like an algorithmic sequence. The immediately realizable ones are related to the third version of the Web and the famous 4th Industrial Revolution.

The term "Web3" was coined in 2014 by Ethereum co-founder Gavin Wood and refers to a new version of the Internet based on decentralized control, multipolarity, cryptocurrencies and Blockchain technology, distributed ledger chain, chain of transaction groups, chain of notifications) is a new technology (distributed ledger technology) which presents itself as a public, unmodifiable history of a distributed series of data, grouped into time-numbered blocks. At its ideal core is the demand for the abolition of political jurisdiction over digital telecommunications and the digital production of values and products in all fields of the social.

The "Fourth Industrial Revolution", '4IR' or "Industry 4.0", on the other hand, is limited to the field of production, from where it seeks to control the other social spheres of activity. The term was popularized in 2016 by Klaus Schwab, founder and executive chairman of the World Economic Forum. It aims to merge technologies such as artificial intelligence with industrial production and create "cyber-physical" systems of automated production with digital management. The ways of implementation are the automation of traditional industrial ones, using large-

scale digital machine-to-machine (M2M) and Internet of Things (IoT) techniques.

The increase in automation aims to resolve the fundamental contradiction of capitalist production, namely to organize the settlement of any emergency problems and the correction of any systemic failure without the need for human intervention.

The 4th Industrial Revolution is the industrial application of the technocratic imaginary by integrating AI into industrial production. According to Wikipedia, there are four design principles in Industry 4.0:

**Interconnection:** The ability of machines, devices, sensors, and people to connect and communicate with each other via the Internet of Things (IoT) or Internet of People (IoP)

**Information transparency:** The transparency provided by Industry 4.0 technology provides operators with vast amounts of useful information needed to make appropriate decisions

**Technical assistance:** first, the ability of support systems to support the workforce by gathering and visualizing information extensively to make informed decisions and solve urgent problems in a short period. Second, the ability of cyber-physical systems to physically support humans by carrying out a range of tasks that are unpleasant, overly exhausting, or unsafe for their human 'partners'.

**Decentralized decisions:** The ability of cyber-physical systems to make decisions on their own and perform their tasks as autonomously as possible.

The technical roadmap and technical means are constantly being improved and are ready. And, logically, innovative AI applications are the main market for

connecting the information giants with the industrial giants.

So far down the road, we see AI applications and the companies behind them colonizing all fields of human activity. We have posed the problem not as a question of replacing the subject but as a question of substituting the subject. The problem arises not from the digital machine but from the mechanism of social relations of domination that uses the digital machine, which parts of the ruling elite intend as a new model of technocratic dictatorship.

But perhaps the existential dimension of the problem is clearly seen in the areas that are considered exclusively social activities. And central among them is not the sector of production, but the sector of governance.

The unresolved question remains in the field of the political, which is the field of organization and control of explicit institutional power, but also in the field of culture, which is the field of conflict, negotiation, emergence, annihilation, and domination of individual social imaginary meanings.

Neural networks are trained with minimal supervision and may develop mechanisms during training that we do not predict.

As models become more capable, predicting their mechanisms in advance will become increasingly difficult and the need for effective unsupervised exploration tools will increase.

Assuming that AI will eventually reach the level of mature human intelligence, we can conclude that, regardless of performance, certainly current models are immature intelligence.

While Biden passed the ChipsAct bill in 2023 to restrict the export of high-powered microchips like those of Nvidia and Trump promised 500 billion to AI companies, two

Chinese companies [DeepSeek and ByteDance, the owner of TikTok] have presented AI models [LLM's] that operate at 50 times less training cost and in ways that bypass the need for high-powered microchips, i.e. cheaper.

You see, in the first week of his presidency, after his inauguration on January 20, 2025, Trump announced a \$500 billion package for digital technology development. Sam Altman of Open AI immediately announced \$100 billion investments under the package. Directly Elon Musk responded that Sam is lying because he has not and will not receive any money. Sam accused Elon of caring about his companies and not America. Pretty funny fight in public view.

This intra-competition between the closed-source AI oligopolies for a share of government funding became obsolete after the highly successful launch of DeepSeek's r1 app as an open-source AI. Trump called it a "national wake-up call", while users worldwide were excited by the hope of escaping the grip of oligopolies.

It should be kept in mind that DeepSeek started retraining Large Linguistic Models after Meta, Facebook, and Instagram, first used open source for their Large Linguistic Models [LLMs]. DeepSeek used Meta's Llama model for initial training.

Certainly, DeepSeek's presentation, at a much lower cost than the US ones, helps to communicate the AI, as well as lower costs to the public - through capitalist competition for power, not through social egalitarianism of the commons. DeepSeek is owned by the High Flyer group, backed by the Chinese state, and works with quantitative analysis, i.e. automation in stock management - two years ago it was blamed for the sharp price swings in the Chinese stock market - of course, every use of the app trains and feeds the app with data. It is, therefore, a triumph for open software. But is the triumph of open software also a triumph of the commons?

Like Meta, DeepSeek also takes advantage of open source to improve its models. Of course, DeepSeek breaking the oligopoly will likely lead to a greater distribution of resources to smaller companies in the US as well. But this is mainly for the developer space and start-ups that aspire to sell their patents to a giant, not the general public. As we saw with Linux, open software does not mean giving up the power of the multinationals. On the contrary, it often becomes the means of discovering the necessary innovation through the research passion of free researchers and integrating it through the market, which reduces the cost of corporate research. Surely Mark knows this.

US claim to technological dominance is crumbling. But is this sufficient, beyond desirable? Since technological development is directly dependent on official policy planning, it seems to me that the issue needs to be explored on a policy basis and thoroughly, in terms of the interests represented. To date, not only have the interests of the wider society not been represented, but even the symbolic value of a mutual understanding of the common good is being eroded. Digital applications in communication seem to reinforce individual fragmentation, not collective politics.

Would you entrust the most important public services, productive functions, and advice to a minor? It is already happening in the fields of knowledge production. There now the curators do not only have to point out the error, it is automatically multiplied.

This is the Digital Fossil: An old error preserved in files used as AI training data and unexpectedly reproduced in new texts. Digital fossils are “nearly impossible to remove from knowledge repositories,” according to a group of researchers.

A recent example is the meaningless phrase “vegetative electron microscopy” The fossilization process began

with an error in 1959 in two papers printed in Bacteriological Reviews, which were later scanned and digitized. The misprinting confused the digitization software, which merged the word “vegetative” from one column with the word “electron” from the adjacent column. As Retraction Watch documents, nearly 64 years after publication, the unintelligible phrase “vegetative electron microscopy” began appearing in research papers from Iran. The researchers note:

*"We also found that the error persists in later models, such as GPT-4o and Anthropic's Claude 3.5. This suggests that the error may now be permanently embedded in AI databases."*

META, the parent company of the current platform, released the new Llama 4. AI model, the latest attempt to create what we could call GPT-5 level AI, the next step towards General AI. OpenAI failed and called their latest model GPT-4.5, Musk failed, as Grok 3 is no better than GPT-4.5. Google failed, and so did Anthropic.

On April 7, 2025, Meta's vice president for AI, Joelle Pineau, resigned. A rumor circulated that Meta officials falsified the results to make them look more favorable to the presentation. Also, according to a recent AAAI survey, 84% of AI researchers believe that LLM [Large Language Models] will never be adequate for General AI.

Two races are going on right now for AI. Scientific research and hype. The latter is running faster and I fear will influence more political actors in giving bureaucratic functions to automatic AI programs that will be premature and full of errors. We know from experience that communication, even at a distance, even with strangers, builds emotional bonds and unions. Even with machines? Gamers already know the answer.

Meaning is always meaning for some living subject - meaning is addressed to the active human subtext, is

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created by the anonymous collective social imaginary, and must correspond to subjective meaningful articulations of representation, feeling, and intention.

A sufficient and necessary condition of meaning is the selfhood of the subject and the interaction of the psychic pole of the individual radical imagination with the social pole of the collective imaginary. It is the user who creates the network as a semantic space, not the manufacturer or provider. Every human subject is an active temporality and historicity. Every living human subject is a multiplicity in becoming. Multiplicity is a unitary synthesis of body and soul. Multiplicity is intrinsic, factual, and psychic, but also extrinsic, multiplicity of social roles it can perform. The historicity of the subject is always determined retrospectively because its temporality always includes the element of the unpredictable and the indeterminate. This is also the timeless meaning of Solomey's "no one before the end is mourning."

The imaginary as a source of otherness, i.e. of the same temporality, both psychic and social, is the logical and ontological precondition of historicity. The semantic field \*cyberspace is additionally part of the social/historical. Cyberspace exists within social-historical time - its spatial or topological description is representational, not ontological.

Time is a logical and ontological precondition of the continuity/discontinuity binary, as well as of the secondary binaries of virtual/real and analog/digital. The analog world is digitized representationally, not substantively, so there can be no separate hyper-reality except as an abstract schema.

The human subject as an acting historical temporality is the only active producer of meaning on the Internet. The Internet creates a digital global space and global time where humanity is communicatively represented. It thus undermines national representation and directly connects

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the local with the global by challenging borders. It creates the conditions for overcoming local isolation and for an expanded and (immediate) democratic state culture of cosmopolitanism beyond both nationalism and internationalism, both of which presuppose the exclusive sovereignty of the nation as the bearer of political power.

This creates alternative forms of social organization of interconnected autonomous localities and the conditions for global-scale direct democracies. Reality is neither fully defined nor fully determinable. Reality is layered, in various ontological categories with non-normal correlation, it is a magmatic reality, where the given is always presented in a way mediated by the established social imaginary meanings, on which the meaning is based, presented in the individual field of the digital as information. Digital humanism means the recognition of active human subjectivity as a capable and harmless condition of the existence and functioning of the digital world within the framework of individual and social autonomy. But this presupposes the weakening of corporate control from above, not its strengthening. It presupposes digital humanism, equal access, social accountability, and user democracy. A political and not a technical project.

## Chapter Four: POSSIBLE FUTURES

### Digital commons as a praxis of digital repossession

Digital commons can be considered as a 'practical paradigm' that materializes a set of basic values opposed to dominant capitalist norms. Values like reciprocity, equity, solidarity, self-management, and horizontal networking through distant cooperation. By 'practical paradigm' I mean, as opposed to theoretical paradigms, a model that can be implemented practically, thus creating a network of human activities towards common goals.

A bridge between code and practice is possible thanks to the ontological duality of the digital sphere, where models are communicative practices and not just abstractions. A practical paradigm can develop further into the communicative modality of social autonomy by means of revocability, equality, inclusivity, self-government, and cosmopolitanism. This would require action, both in the sphere of common production and in the field of cultural creation. The rooting of digital commoning in physical social-historical reality opens possibilities for a wider radical social transformation through the combination of digital commoning with practices of grassroots democratic politics and social-ecological communities. This implies the creation of an autonomous free public space and time both in the digital and physical realms of human co-existence. There is an inherent circularity of logic, or a hermeneutic circle, if you may, lying at the depths of the imaginary horizon of future projections; every vision of institutional transformation that runs counter to the dominant imaginary significations implies a radical transformation of the social imaginary which refers back to the projected institutional transformation.

This is an inherent logical horizon of arguments, that we could metaphorically imagine like the physical event horizon. However, the management of information provides a deep penetration of capital and state mechanisms into personal space and time in a way unprecedented by personalized and individualized targeting.

The use of personal data by capitalist enterprises like Google is a step towards the commodification of experience as predictable behavior, a fourth step beyond the three "commodity fictions" that Karl Polanyi identified as dominant tendencies of the capitalist imaginary. These were the conceptions of life as labor, nature as real estate, and exchange as money.

Polanyi in his opus magnum, *The Great Transformation* (1944) notices the fictitious, or imaginary character of the "commodity description" of labor, land, and money which informs the organizational principles of capitalist society:

The commodity description of labor, land, and money is entirely fictitious. Nevertheless, it is with the help of this fiction that the actual markets for labor, land, and money are organized\*: these are being bought and sold on the market; their demand and supply are real magnitudes; and any measures or policies that would inhibit the formation of such markets would ipso facto endanger the self-regulation of the system. The commodity fiction, therefore, supplies a vital organizing principle regarding the whole of society affecting almost all its institutions in the most varied way, namely, the principle according to which no arrangement or behavior should be allowed to exist that might prevent the actual functioning of the market mechanism on the lines of the commodity fiction. (Polanyi, 1944: 76)

If we extend Polanyi's argument to digital capitalist markets and services, like Web 2.0 applications and social media we can see that they represent actualizations of a fourth commodity fiction that conceptualizes personal

experience and individual behavior as market values. In Marxist terms, one would call it the reification of personal experience. The example of Instagram influencers that make fortunes through product placement albeit by also reducing themselves to products seems redundant by now. The reification of personal experience is the result and goal of Data extraction and collection by private companies supplemented by mechanisms of attention baiting and time consumption driven by personalization algorithms.

Henrik Roth defines the idea as such:

*The idea of individualization in marketing is the idea of marketing to an individual on a personal level. This can be done through personalization or customization. The goal of this approach is to create a connection with the customer on a more person-to-person basis.* (Roth, 2022)

Digital Commons place these commodity fictions under scrutiny and practically shows their falseness. In both the theory and practice of Digital Commoning exchange is not money, labor is not exploited, nature is not regarded as simple resources, and individual experience is not rendered down to measurable behavioral patterns.

If considered in a three-fold context, together with Direct Democracy and Social Ecology, Digital Commoning provides the frame of a different social imaginary that conceives social temporality as an open, horizontal, and egalitarian network of specific individuals and politically responsible citizens.

Castoriadis has already, from the early '60s pointed out that the flow of information responds directly to the structures of political power in any society. In our world of hierarchical representation information is extracted from below, from the people, and commands are issued from above. On the contrary in autonomous, more democratic political forms, there is an active effort to reverse the flow,

so that commands of political decisions would be issued by the social basis which would be informed by the second-order institutions of data processing.

Digital Commons, in my opinion, provide a practical paradigm and a practical apparatus but also invite us to imagine different forms of social cooperation, co-existence, and temporality that could enforce the project of social autonomy toward a post-capitalist ecological and humanist common future.

The beginning of Big Data, which Zuboff claims to be the origins of Surveillance Capitalism, coincided, we should note, with two other major historical events of 2001 that shaped the global landscape of the 21st century.

These were, first, the culmination of the global anti-globalization (or alter-globalization) movement with the huge demonstrations in Genoa, Italy in July against the G8 Summit (Císař, O., & Slačálek, O. 2007) and, of course, second, the terrorist attacks against the Twin Towers in New York, USA, on September 9th. We should consider these events not as complementary but as antithetical, pointing towards different future horizons of expectations, stemming from opposing past spaces of experience. Genoa demonstrated the possibility of a global movement towards social emancipation from capitalist monopolies and state authorities, a possibility that was cut short by the terrorist attack against the Twin Towers, which automatically gave state authorities and capitalist monopolies the means and power to intensify their control over societies.

The 9/11 terrorist attacks in New York mark the beginning of an irregular 'War on Terror', which intensified state surveillance powers and lifted legal protections from citizen's privacies both in the USA and the EU, at the same time when private user data were beginning to get mined by Google and more to follow for private gain. Both State authority and Private Capital seemed to converge at this

melting point in history to harness and exploit the newly publicized Internet and other digital technology affordances. This was the dominant trend and the path taken, leading to the turbulences and crises that characterized the first decades of the 21st century and have reached a critical climax today, with a manifold of crises of existential scope facing humanity. This should not make us forget, however, that the alternative path was not abandoned and social movements did not concede to the new phase of surveillance capitalism. The first decades of our century also tell a story of social resistance and the flourishing of the anti-systemic social imaginary.

### Societies on the move

The anti-globalization movement that marched in Genova in 2001 also responded to the War against Iraq, and an anti-war movement emerged in Western countries. In the following decades, a vast diversity of social movements would emerge on many levels, with many achieving global importance, however locally focused. And the direct democratic Occupy movement with multiple local focus points and a global reach shook many regimes in 2011. (Nielsen, 2013)

The Occupy movement also gave rise to a series of insurrections in the Middle East, the Arab Spring, which deteriorated into a series of civil wars and proxy wars between Great Powers, without however failing to transform the landscape of the region. I should just mention the rise of the direct-democratic Confederation of Rojava, North-East Syria. As described by Wikipedia:

The Autonomous Administration of North and East Syria (AANES), also known as Rojava, is a de facto autonomous

region in northeastern Syria. It consists of self-governing sub-regions in the areas of Afrin, Jazira, Euphrates, Raqqa, Tabqa, Manbij, and Deir Ez-Zor. The region gained its de facto autonomy in 2012 in the context of the ongoing Rojava conflict and the wider Syrian civil war, in which its official military force, the Syrian Democratic Forces (SDF), has taken part.

The social experiment of Rojava is exemplary for the creation of social autonomy through a revolutionary process of institution-building based on the explicit values of social ecology, women's liberation, horizontal decision-making, and equality in political participation and social right, amidst a region that has been drowned in religious fervor, sexist discrimination, and intolerance.

Rojava in the Middle East and the Zapatista regions in Mexico are two active examples of autonomous societies that oppose the dominant values and tenets of nation-states and capitalism. Their significance is immeasurable, but their influence over global politics is diminished by the fact that their initial conditions were quite peculiar to their localities. The Zapatistas rose among the marginalized native communities around the jungles of Mexico, a region outside the hubs of global capitalism, while Rojava arose from within the civil war in Syria, after the de facto demolition of central state mechanisms and the subsequent victorious fight of the Kurdish people against both the Islamic State and the Turkish military.

The beginning of the 21st century marked a new era of social crisis and social struggles between national/international established authorities and local societies on multiple levels that are inter-complementary; locally and/or globally, physically and/or digitally, individually and/or collectively. This era has also witnessed the worldwide emergence of social movements that transcend traditional political forms of

organization, like the party or the syndicate (Fominaya, 2017).

I will highlight the distinctive elements of contemporary social movements that set them apart from traditional forms of collective organization and actually provide modes of compatibility between digital commons and social-historical struggles.

But what is a social movement? While social movement theorists have given an array of definitions, one of the most recent and useful classifications has been provided by Charles Tilly, who distinguishes social movements from other forms of contentious politics, based on the synthesis of three factors: 1) a campaign, meaning a sustained collective effort to propose particular claims against established authorities 2) the employment of various political forms of dissent, called the social movement repertoire and 3) public representation of the worthiness, unity, numbers and commitment on the part of the participants (Tilly, 2004: 4).

Tilly also distinguishes between a social movement and other collaborative politics like an electoral campaign, an organized interest group, a political party, or a syndicate. According to this approach, social movements share a common historicity, being a form of public dissent invented in the late 18th century and his contribution is the tracking of that history.

However, we can trace some additional distinctive features as regards concurrent social movements. We can divide them into democratic-antiauthoritarian and conservative authoritarian based on their internal organization and aspirations. An example of the second is nationalist movements that emerge in collaboration with authoritarian centers of power. As regards the first, they share some common characteristics.

The criterion of distinction is hierarchy and closeness. Conservative authoritarian movements, even when co-opting the anti-establishment label are always linked to an established figure of authority in a vertical structure of closed hierarchy, scaled according to power and authority that are concentrated on the top, the leading elite, who are the linkage between the dominant establishment, being members of it, and the following crowds, that are consensually manipulated. Such movements, like Trumpism, feed on digital networks of the dominant capitalist model and social media of top-bottom propaganda. As such, they are rather alternative supplements to the established and systemic authorities, a useful backup of authoritarianist discourse, and a tool for social division and diversion. Their power rests on the backing of systemic structures and the help of systemic actors and they promote reactionary conservative values in the manner of product advertising and placement. So, they are compatible with surveillance capitalism and auxiliary mechanisms to systemic control of public opinion.

On the contrary, democratic social movements are inherently anti-authoritarian, embracing a set of values that are explicitly opposed to capitalist exploitation, authoritarian administration, and individual obedience. They distrust vertical, hierarchical forms of organization and resist efforts to co-opt them. Their core values provide for such an ability to resist since they place themselves against the very core of the dominant capitalist-authoritarian paradigm. They instead try to form networks of autonomous collectivities premised on direct democracy and solidarity (Rancière, 2017).

Three common elements of such networks are the absence of formal leadership; the emphasis on communal assemblies and direct democracy as essential

elements of social self-government; and the refusal to endorse the traditional politics of state power seizure.

One of the confusions that, according to Tilly, obscures the analysis of social movements is the confusion of a movement's collective action with the organizations and networks that support this action (Tilly 2004: 7). If we follow this distinction, we may understand clearly the difference between a movement and a hierarchical political organization based on the rigid and explicit hierarchical structures of the latter.

On the other hand, how can we make the distinction between a democratic, anti-hierarchical movement and some grassroots, anti-hierarchical political collectivity? There is an overlapping of actions since anti-authoritarian networks tend to assume the form of a movement explicitly since they aspire to a radical questioning of the dominant system as a whole.

In order to make this distinction clear, we need to focus more on the issue of historicity (Tourraine, 2004). This consists in the fact that beyond the history formed by the overall progression of social movements, there is also the specific internal historicity of each movement which is different from the internal historicity of each political collectivity that constitutes the former. Political collectivities create an internal temporality based on explicit rules, typical procedures, and consensual processes. However, the social movement as a whole also included activities and informal networks that expanded beyond the formal processes of political collectivities. New possibilities emerge within new forms of association, deliberation, and cooperation that may emerge from implicit attitudes, internalized manners of behavior, embedded ethical imperatives, and collective moods. The way a movement evolves through time moves, according to theorists (Miller, 1999) from its

inaugural emergence to its institutionalization or bureaucratization and decline.

Institutionalization is the mode of co-existence on a social level, by creating rules and institutions to organize collective action and convivial modes of common life. At the level of social movements, institutionalization means the creation and implementation of their own autonomous institutions of self-governance and self-organization that result from the struggle against instituted authorities and act as counter-examples to the dominant societal paradigm and also as hubs of common networks that materialize a different way of life.

We should note that, as regards democratic social movements, institutionalization and bureaucratization lead to different paths. A democratic social movement can be instituted without being assimilated by the system but rather by implementing a new system, while it cannot be bureaucratized within the system without first being dismantled. Its temporality is abrupt, tense, and discontinuous, determined by a complexity of external and internal factors and articulated in public events and rebellious actions.

By temporality we mean the dynamic rhythms of individual interaction and social cooperation. Every self-organized form of being, social co-existence included, creates its own temporality (Castoriadis, 1998). Social temporality stems from the collective activity of conscious actors. The inner rhythm of the temporality of collectivities is dependent on the degrees of freedom for individual creativity that are enabled by their functional structuring. This also determines the external temporality of collectivities, meaning the influence of their activity on their broader social-historical reality, namely their ability to create significant events.

Repetition and reproduction are the identity features of social temporality since collective activity creates

temporal structures. Such structures can be social institutions and symbolic systems of signification invested with duration and reproduction functions (Castoriadis, 1997; Schismenos, 2018). Therefore, temporality is the dimension of social co-existence that transforms social relations. Simultaneously, temporality conserves what can be transformed into an element of a new situation after a series of events.

Shared experiences and common events, aside from political demonstrations, like free lessons, shared lunches, and artistic events, are also processes that ground individual temporality into a shared space of coexistence. In this sense, social hubs create a mode of 'daily temporality' in direct contrast to the dominant social time. They also create a different form of 'common temporality' that is interrelated, but distinct, from the temporal structures of a political collectivity or a social movement.

On the other hand, the temporality of a democratic political collectivity is more stable, progressive, and continuous, determined by the participants, articulated in internal meetings, and the interaction with broader social movements. This field of interaction is of importance since it has not been thoroughly analyzed in terms of temporal tensions. Horizontal networks of equality and solidarity with a global spread and local activity revive the hope for a shared future against the destructive forces of neoliberalism. They create an alternative sense of social temporality, which, however, is fragile and depends on the invention of direct democratic institutions to stabilize and mobilize.

There is a common horizon of expectations within democratic social movements that are based on the values of freedom, equality, reciprocity, and community engagement. Castoriadis (1996) has pointed out that the idea of a common good defines social time.

Consequently, the sense of the common good constitutes the future dimension of social time (i.e., the common horizon of expectations) and its relation to the past (i.e., the common space of experience). Social movements create temporal modes within a hostile political environment that form an alternative sense of common good.

However, this is delimited by the dominant social attitudes, systems of signification, and established institutions. Direct democratic institutions that can materialize this shared future in temporal structures of duration should be developed. Such institutions should also interconnect the distinct fields of social temporality: the daily temporality of the individual; the abrupt temporality of the event; and the long-term temporality of a social movement.

Direct democratic institutions constitute the temporal sphere of politics that combines the space of past experiences with the horizon of future expectations in the form of political decision-making and enactment. This sphere cannot be constrained to a single form of a party or a traditional political organization but needs to open up as a free public space and time constituted by a plurality of equal complementary particularities.

These characteristics indicate that the digital realm is as important as the physical realm in terms of social-historical co-existence, as a distinct, but interdependent sphere of social interaction and collectivity.

If our age of Surveillance Capitalism can be signified by authoritarian acts of digital dispossession, we can define digital commoning within the framework of democratic social movements as a collective praxis of digital repossession.

In order to clarify what I mean by this above phrase, it would be best to break it down into its elements. I use the

term praxis, to describe what Castoriadis defines as "neither as a blind explosion, nor as an empirical practice, but as a revolutionary praxis, as a conscious activity that remains lucid about itself and is not alienated from itself in a new 'ideology'. (Castoriadis, 1987: 62). In that sense praxis is the combination of theory and practice towards the transformation of social normativity that involves also a critical function of self-reflection.

I use the expression digital repossession in contrast to Zuboff's definition of digital surveillance capitalism as a cycle of digital dispossession. This Cycle of Dispossession manifests in an anti-democratic pattern of a four-stage process: incursion, habituation, adaptation, and redirection. B. Wylie has given an example based on the case of Sidewalk Toronto, an urban development project proposed by the private company Sidewalk Labs at Quayside, a waterfront neighborhood, which was canceled after ruinously affecting the public spaces and the private lives of the residents.

*The incursion stage is when a tech company makes a brash move into a space or business vertical to turn it into a digital market. [...] Phase two, habituation, is best understood as the normalization phase. [...] Adaptation, according to Zuboff, is the third phase – when tech firms switch to agreement with public critique and issue a mea culpa of sorts [...] The final phase of the dispossess cycle, redirection, involved narrowing public discussion to focus on hundreds of details so that the overall construct and history of the deal weren't on the table for debate or input. Public attention was redirected away from the core issues: a lack of proper digital governance policies and a botched public tender. (Wylie, 2020)*

We can apply the same model to all spheres of social coexistence, public space and time, but also to the private sphere of interpersonal communication, where our data,

content, and public image are rendered to commodities without having any control over their commodification.

Through acts of dispossession, capitalist mechanisms seek to privatize the public settings are invasive functions that violate privacy and commercialize individual temporality both on the surface, interpersonal level of communication, and deeper, within the private sphere of self-identity, self-reflection, and self-appreciation.

Temporality and community are the key conditions for these acts of dispossession or repossession. In that framework, the individuals who allow their personal time to become colonized, co-opted, and absorbed within the dominant rhythms of social networking, profile influencing, and digital marketing contribute to the expansion of the networks of capitalist dispossession actively, by becoming proponents of their marketing model. As I noticed before, in the digital world, models are practices and the capitalist terms of digital representation are terms of individual commodification. These digital netizens are the innovators and influencers of capitalist post-modernism, they are the new entrepreneurs that exploit and are exploited, they are actors of the dispossession machine. Therefore, they create consumerist communities, which function as operators and accelerators for the cyclic, repetitive temporality of dispossession; incursion, habituation, data reification, and public diversion.

This cycle feeds the multiplication of social crises through the spread of individualistic consumerism, political apathy or fanaticism, the proliferation of advertising strategies, and the reification of personal experience. Time and community in the form of personal engagement and collective experiences are the new commodities, fragmented under the fictitious principle of digital individuality.

On the contrary, the praxis of digital repossession is constituted by the creation of a free common temporality via the tools provided by digital commons and the emancipation of human subjectivity within open, horizontal, and democratic communities. Digital repossession means an autonomous configuration of communal temporality based on the principles of solidarity, equality, sharing, and reciprocity in the context of network self-governance that is provided by the framework of cosmopolitanism. I will explain the concept of cosmopolitanism in more detail, but I should point out that cosmopolitanism refers to the horizontal digital networking of commoners in the fields of design, production, and cultural exchange that are based on locally rooted communities and hubs that communicate and co-operate on a global scale.

### Digital consumerism

The mechanisms of surveillance capitalism take advantage of the digital tools available for instant communication and digital individualization. Social media companies, like Facebook/Instagram/Threads Meta, have a monopoly over the data and information market that has never been seen before and would not be tolerated in other sections of the economy. Facebook extracts pure value without producing any content or information, by just providing the digital platform. Information and content are freely given by its users by their own will, and thus willingly become both the commodity and the consumer creating revenue through targeted ads and profit for the company. Facebook/Instagram/Threads Meta is a mere example, but a valuable one, due to the sheer amount of users it controls, which constitutes a globally distributed digital community so influential, that

the choice to abstain from it carries certain ramifications. As it happens in every society, the trends that are popular enough carry a significant social-historical gravity within their temporal flow that makes them relevant beyond their limits. They become carriers of historical events and the agents that control them become political actors on a transnational scale. The scandal of Facebook's involvement with Cambridge Analytics and the exploitation of user data is just a precautionary incident.

The fact that many users acknowledge this relation of exploitation does not mean they stop using the medium. Such a vast amount of new social relations and personal communication has been created within the platform and is dependent on it, from professional to sexual interactions, that the platform itself has gained an almost existential significance for each user. Social media users tend to spend significant amounts of time interacting with other users who they meet within the medium, forming relationships through chatting and sharing, which reach deep within the emotional psychical world of the individual, because emotional investment is an imaginary mode of association that needs only the trace of the presence of another person, not their actual being there, to form bonds of affection. When we hear the voices of loved ones online we feel as if we could touch them through the screen and their words carry the full tension of their being. That is the mode of telepresence, a strong modality of co-existence based on symbolic language, with strong emotional bonding, as exemplified by long-distance communication in history along the vastness of space and time. Digital technologies created cyberspace which is the distinct ontological plane of telepresence, hence materializing the existential mode of telepresence in the form of digital profiles. The distinctive attributes of telepresence in cyberspace are: instant access and constant availability. Hence, individual temporality is fragmented and also accelerated in accordance with the

rhythms of the informational flow, beyond the conscious control of the subject.

The COVID-19 pandemic and the subsequent lockdowns and quarantines enacted on a global scale gave a decisive boost to the spreading of the modalities of telepresence in every sphere of social existence, from teleworking to sexting. The internalization of the principles of digital individualization and dispossession by users has led to more online services conforming to the social media model of constant engagement.

This capital is inherently profitable, as its surplus value is net worth value, generated not by the exploitation of labor, that is, the exploitation of the working part of individual time, but by the exploitation of recreation, that is, the exploitation of the "free" part of individual time. If all users decided to abstain from the medium, Facebook would collapse together with its net worth capital. The ability of the medium to generate profit equals the ability of the medium to generate engagement. That means, the ability of the medium to form communities of consumers. These imaginary communities cannot fully integrate the person, since they are formulated around specific preferences and fanfiction commodities. To rephrase it, their common is an object of desire external to them and their interactions refer to events and persons outside them. As such they are consumer communities devoid of creative power but bestowed with the power to create informal advertisement content and act as auxiliary informal advertisers of the product in reference, whether this may be a person, a service, a place, an object, or an idea.

This makes every imaginary digital community fragile since it cannot include the wholeness of an individual's life like physical communities can, but with strong penetrative dynamics, since they create semiprivate environments of collective connection via individual isolation, circulating from the private space to the public

without the risk involved in any personal physical participation in the physical public space.

### **Acts of digital repossession**

Our current situation of inhabiting both the physical and the digital world opens up before us an array of potentialities and possibilities that diverge on the essential issues of democracy, control, and commodification.

Following Freeman's advice for experimenting with alternative organizational forms and techniques (1972), social collectivities could embrace some of the norms and operational rules of communities creating digital commons. Commons are understood as a shared resource that is co-governed by its community of users, according to the rules and norms of that community (Bollier, 2014).

The rules and norms of digital commons communities empirically exemplify some of Freeman's principles of democratic structuring. One of the guiding principles in such communities is equipotentiality, which means that everyone can potentially be involved in a project. In equipotential projects, the rules are open and available for everyone, while participants themselves choose the activity to which they feel able to contribute. This implies equal access to resources needed by the group, as Freeman (1972, p. 165) suggests in her principles. The quality of cooperation is assessed through communal validation, without any authority prejudging the ability to collaborate.

Another element of digital commons communities is holoptism, as opposed to panopticism (Foucault, 1977) the state where a centralized power can see the whole.

Holoptism provides participants with free access to all the information related to the other participants. An enhanced application of Freeman's principle of diffusion of information to everyone as frequently as possible (1972, p. 164). This information concerns the existence and contribution of participants (i.e., horizontal dimension), as well as access to the aims and documentation of the whole project (i.e., the vertical dimension). Such circulation of knowledge would be valuable in addressing issues of historical reflection as a collectivity.

In the fields of research and design, peer-to-peer digital networks are organizations that collectively and autonomously build digital communication tools and envision a different production paradigm, based on the joint production and management of knowledge and technology, which subverts the logic of ownership and patents. Digital networks provide the model for community-based production as the most inclusive and environmentally sustainable paradigm of social organization. (Kostakis V., & Bauwens M., 2020)

As human labor becomes more infused with digital technologies, modularity in production and consumption becomes a more apparent and significant feature. Kostakis is careful not to identify modularity with a particular political trend, showcasing how large information companies also utilize modular modes of production:

"Modularity allows for-profit firms such as Apple, Samsung, and Amazon to outsource the manufacturing of their products and, in addition to the already stated benefits of modularity, to profit from cheap labor. [...] Further, IBM, Google, and Facebook benefit from crowdsourcing part of their value chain to freelancing or voluntary labor (e.g. the Android ecosystem, the free and

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open-source software, or the community-based content creation)." (Kostakis, 2019)

The difference between the traditional capitalist and the peer mode of production is the subversion of the central imaginary profit motive of private property in favor of the values of reciprocity, horizontality, equality, and collective solidarity. Locality is a defining characteristic of social decentralization that contemporary peer-to-peer networks seem to incorporate into the modular design of products. Local units are autonomous entities that can interconnect and interact without losing their regional independence.

So, we can view extant P2P networks and other forms of digital commons as present experiments for a post-capitalist future, that take into consideration the crisis of representation, production, individual creativity, and social commonality and try to address them practically by using digital tools.

Commons-based production in the digital world has, in this way, created an alternative paradigm for the production of objects based on the locality and global networking of autonomous local units. It has thus offered a model for organizing production based on cosmopolitanism, which bypasses ethnic divisions by linking the local to the global. Of course, such a model would not be possible without the global digital telecommunications network, without cyberspace.

However, the practical paradigm is not restricted to the digital world. Digital commons provide the inventory of online networking, design modularity, and communicative telepresence in a non-exploitative but participatory framework but the interlinked hubs are rooted within the concrete present of physical reality. Some of them are based on the model of worker cooperatives that manufacture, educate, or create, alongside their products, also a common temporality and spatiality.

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Groupmuse, a platform for traditional music shows, became a worker co-op and then added a musician-owner class and survived the pandemic, while Python, the most popular programming language, shared open-source with core developers.

In Greece, Tzoumakers is an open lab for communities to cooperatively design and manufacture tools for small-scale agricultural production, situated in the mountainous region of Epirus. Their stated vision is to create such sites in both villages and cities where citizens may take technology into their own hands. These sites may be supported by municipalities and/or by multi-stakeholder cooperatives.

VIO.ME. Coop is an occupied factory, situated near Thessaloniki, that changed its mode of administration of production with respect to the principles of solidarity, self-administration, and social ecology. They have gained knowledge and design ideas through open-source digital commons. They rely on a vast digital network of solidarity groups and producer-consumer collectivities to keep on with their new mode of production based on quality rather than quantity.

Athens School Coop is an open educational cooperative that promotes social ecology, direct democracy, and transdisciplinary research through educational seminars, field activities, theatre, and the preservation of traditional techniques in the fields of carpentry, traditional musical instrument manufacturing, political theory, philosophy, literature and theatre studies outside the established system of state and private education. In all examples, digital commoning provides the informational and communicative tools and resources to expand their local activity on a global scale. This is an enactment of cosmopolitanism.

### Cosmolocalist perspectives

Cosmolocalism, in our view, is an emergent mode of social interaction that combines universality and locality and is inherently connected with digital commoning and digital network technologies (Schismenos, Niaros, Lemos, 2020).

Every individual is in a way instituted by society, though never completely (Castoriadis 1997). Hence, locality and universality are always interrelated and exist as a duality between two interwoven dimensions of social-historical identification. In every instance, the self-image of society is constituted concerning both local and universal dimensions. However, their specific content in every historical period changes in accordance with dominant social imaginary significations. As a mode of social interaction, cosmolocalism is also a mode of social-historical co-existence, that is based on a new configuration of the existential categories of universality and locality under the digital mode of telepresence (Schismenos, 2023).

As a way to globally link local communities in networks of shared exchange concerning both production and consumption (Manzini 2015), cosmolocalism networks also reinvent the communal in an open and resilient manner (Escobar 2018). In this context, the relation between locality and universality is interlinked openly, respecting and promoting local communities across a global network of equal co-existence (Sachs 1992).

Taken as a model, cosmolocalism is opposed to globalized capitalism at its core, questioning the dominant significations of nation-state authority, national boundary restrictions, and private market monopolies.

Kostakis argues:

*"Commons-based peer production reverses the industrial logic of restrictive intellectual properties and global supply chains feeding into economies of scale. Instead, intellectual property is, as a commons, accessible to everyone, with knowledge production taking place openly on a global scale. Manufacturing takes place locally by communities or enterprises, often through shared infrastructures and with regional biophysical conditions-needs under consideration. [...] Grassroots initiatives, which are organized around shareable informational modules, can have both a local and a global orientation."* (Kostakis, 2019)

Interestingly, this paradigm of commons-based production has also been implemented in agriculture, with very positive results by small-scale agricultural initiatives by organic farmers and ecological activists that manufacture their tools and methods collectively and in deliberate opposition to the dominant capitalist model, like L'Atelier Paysan (France) and FarmHack (USA). Both are agricultural communities that communicate, coordinate, and cooperate through open-source digital platforms. They are collective networks of localized production based on "open source agriculture," because they utilize digital information and communication technologies. Chris Giotitsas argues that open-source technology can be used as a tool for the democratization of technology enabling individuals to freely participate in the process of design, manufacturing, and production, and "to participate effectively in a widening range of public activities." (Giotitsas, 2019: 7)

Another example, suggested to me by Pekka Butler, is the Free Appropriate Sustainable Technology (FAST) research group run by Professor Joshua Pearce in Canada, which focuses on practical innovative solutions to sustainability issues. They describe their goals as the exploration of "solar photovoltaic technology as a

*sustainable ecologic energy resource, but also how open-source hardware like open source appropriate technologies (or OSAT) and RepRap 3-D printing can drive distributed recycling and additive manufacturing (DRAM) (and maybe even social change).*"

<https://www.appropedia.org/FAST>

The last bracketed phrase regarding the possibilities for social change is quite significant and in agreement with the argument of Giotitsas (*ibid.*), that such decentralized productive infrastructures provide a technological framework for actual horizontal and democratic decision-making. Digital movements like commons-based peer production and open-source free software provide new ways of decentralization, global communication, and local cooperation.

Nevertheless, social change cannot occur without political content and a democratic orientation. For both modularity and decentralization to be combined in a commons project there is also the need for a set of principles of coherency and unification of the units in open democratic networks.

As argued before, democratic social movements are constituted as a horizontal structure of explicit political decision-making and decision enactment that allows maximum individual participation. In the context of digital commons, the same horizontal structure of common discourse, holoptism, shared knowledge, mutuality, individuality, and cooperation applies. Modularity needs to be complemented with open connectivity and decentralization with democratic con-federalization to avoid the enclosure of local units to themselves.

### Rooting in social-historical reality

The age of Surveillance Capitalism, as defined by Zuboff, is also a matrix for social-historical crises. The climate crisis, the social crisis, the representation crisis, the humanitarian crisis, and the identity crisis, combine in a dystopian horizon of expectations that seem to loop back on itself in an orbit of potential catastrophe. This combination is not just concurrence or happenstance, but the manifestation of a deeply rooted crisis of significations.

There are signs of a false sense of inability on part on the individuals caught up in this web of digital dispossession. Digital technology and the emergence of surveillance capitalism have, one could argue, only intensified this tide and the creation of digital social networks has helped it submerge every sphere of social-historical reality.

However, the rise of insignificance also intensifies the craving for meaning and the urge to overcome instituted alienation. Digital movements such as peer-to-peer production and open-source free software provide new ways of decentralization, global communication, and local collaboration.

Global networking and digital commons cannot stand in an environment of centralized power, state and capital collaboration, and predatory competition without local communities with a political horizon of democratic orientation. The process of repossession involved in commoning often includes conflict with established authorities, since it implies the creation of a free public time and space, cooperation with other political collectives, and equal participation in models of free association and self-governance. Depending on the locality, these ideas can become targets of authoritarian persecution, and depending on the case, the people who

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try to implement such ideals, as showcased by Snowden and Assange can find themselves facing exile, prison, or death, even in Western republics.

Castoriadis also recognized the liberating potential of technology, as an essential aspect of any grassroots democratic movement toward social transformation:

*"The available communications and information technology makes it possible to provide the population with all the necessary information to make informed decisions. But the meaning of this last expression can only be decided by the population itself and no one else in its place."*

Modern digital networks have blurred the distinction between private and public and transcended the distance between local and global. Thereby, they reinforce both social injustice and the social struggle for emancipation. During the coronavirus pandemic, digital sociability emerged as an alternative in a socially remote world. The Internet, a realm between the private and the public, seemed like the only non-infectious place. But the Internet is not a place, it is more a threshold between the physical and virtual dimensions of social reality.

The opening of private space to digital sociality seems inversely proportional to the exclusion of public space. But digital sociability is only possible because there is active, physical, personal sociability, something that cannot be replaced but only supplemented. On this basis, there can be no independent digital society without the larger, material society that supports it, but more importantly, without the sphere of ideality that the latter creates.

People suffer, desire, and feel like bodies, and illness reminds us of our interdependence. Disembodied telepresence cannot fill the wholeness of existence, nor the specter of experience, not even of the experience of

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the immersed user. The importance of physical and not just digital, participation in social networks and political struggles has been shown during the pandemic by the Black Lives Matter marches and demonstrations.

The Black Lives Matter movement in the United States, for example, demonstrated that even in the age of digital information, the politics of social emancipation requires the physical presence of every individual in assemblies and demonstrations.

While digital networking technologies provide potential tools for decentralization and knowledge dissemination, we need to establish direct democracy by creating free public space and time to invest in digital communication with truly liberating content from the outset.

Of course, digital social movements cannot be isolated from broader movements for collective emancipation. As Jacques Rancière told us during our meeting in Athens in 2017:

*"This democratization of access to knowledge is very important. But at the same time, I think the idea that the Internet is creating a kind of total democracy is also a fantasy. [...] So it seems that forms of free dissemination do not in themselves mean an increase in democracy. Democracy is not communication." (Rancière, 2017)*

Democracy is not just communication therefore it cannot be founded on telepresence. Even more, human communication cannot be reduced to telepresence without the loss of what is actually significant, meaning the existential importance and emotional gravity of being there among others. So much is communicated among people without words, and so often we find ourselves lost for words but deep in sentiment. The Internet is the best proof. It can be used as a means of online communication for better coordination of information, but it does not

create politics merely as information without the corresponding political action.

On the other hand, on the basis of what we have mentioned, the digital world, cyberspace, and the Internet do not constitute an isolated or independent virtual reality but an active part of social-historical reality. Political action cannot be effective if it ignores the existence of the digital public sphere, because then it ignores the constant transformations of society. Digital humanism is an extension of enlightenment humanism that places free public space and time at its center and has as its horizon individual and social autonomy through direct democracy.

Collective political action transforms the real and turns simple information into a meaningful message. The transformation of the world requires total friction with the world, the direct interaction of the subjects in their actual co-presence, and the gesture that gives flesh and substance to the word. The emancipation of the digital world implies the autonomy of society. Thus, the digital in turn becomes a node of interaction with the social-historical field that has always been the field of action of the subject.

This is also the ontological presupposition of human autonomy and human subjectivity. In the questions of selfhood, community, and politics, digital technology offers communicative outlets but no ready-made answers.

### A common horizon of expectations

In order to think in terms of digital dispossession and repossession, we need to understand what it is that has been taken. If we break it down to specific entities, this amounts to personal data, personal time, and personal control of information. If we sum it up to general qualities, these would be individual agency and collective power on political decisions. In the hands of dominant authorities and monopolies, ICTs become tools of exploitation and digital networking a mode of alienation, on both social and individual levels.

To configure means of resisting these trends and reinventing the potential affordances of digital commoning for overcoming social alienation and confronting systemic inequalities, we need to imagine acts of digital repossession, acts of reasserting individual agency and regaining collective power beyond the boundaries set by dominant authorities.

David Bollier and Silke Helfrich have argued that commoning - free, self-organizing systems ranging from alternative currencies to open-source networks - has an inherent insurgent power. They argue that the potential of the commons for social and individual emancipation from the dominant imaginary of exploitation and alienation would require a shift in perspective, a different common horizon of future expectations, an ontological shift, or onto-shift. (Bollier & Helfrich, 2019)

In conclusion, some theoretical propositions on the framework of such an onto-shift regarding the digital sphere.

1. In the social-historical reality, existence is significance. Social significations are created by the social imaginary

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and correspond to subjective configurations of identity and intentionality.

2. A sufficient and necessary condition of socialization is the interaction of the psychic pole of the individual radical imagination with the social pole of the collective imaginary.

3. The users of digital networking are the real creators of the network as a semantic public space of interaction, not the coders, manufacturers, or providers that mine the users' data.

4. Cyberspace exists within social-historical time. Its spatial or topological divisions are representational, not ontological.

5. The physical world can only be digitized representationally, not essentially. Hence, there cannot be a separate digital hyper-reality.

6. Only human subjects are active producers of meaning on the Internet, not algorithms or machine-learning applications.

7. The Internet creates a digital global space and global time where humanity is virtually represented. It thus undermines national representation and directly connects the local to the global, challenging borders. It creates the conditions for an expanded and (directly) democratic culture of cosmopolitanism beyond both nationalism and internationalism, both of which presuppose the exclusive sovereignty of the nation as the bearer of political power.

8. Reality is layered, in various ontological categories with irregular correlations, where information always appears in a way mediated by the instituted social imaginary significations.

Social temporality transforms the proper temporality of particular social movements depending on their subject and duration. Grassroots political networks that aspire to

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a broad social transformation need to invent institutional flexibility, i.e., the ability to transform their institutional forms according to social-historical circumstances.

Horizontal networks should create direct democratic institutions that would provide the temporal stability of an open structure, maintaining memory, experience, and reflection. Such institutions would also allow for self-deliberation and horizontal decision-making, which are required by political transformation in time. Towards that direction, grassroots political networks could embrace some of the principles seen in communities of digital commoning. Such communities exemplify principles of democratic institution-building such as holoptism i.e., free access to information, equipotentiality i.e. potential to be involved in a project and cosmopolitanism i.e. communication and information networks that combine locality and universality.

We are always closer to the future when acting to transform it.

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# Proof